Malta and Sicily:
Miscellaneous research projects

Edited by
Anthony Bonanno

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Researches in Malta.

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Raccogliamo in questo volume le relazioni delle attività di ricerca condotte all'interno del progetto KASA che non sono state inserite in altre pubblicazioni. I lavori sono stati effettuati nella quasi totalità dei casi all'interno del Workpackage 2 e finanziati dal partner maltese. L'unica eccezione è lo studio di Pappalardo sulle torri di avvistamento, realizzato da parte dell'Università di Catania.

Ciascuno degli studi qui contenuti, inoltre, ha apportato un contributo originale nello specifico campo di ricerca, per cui è sembrato opportuno che i risultati fossero resi noti al pubblico.

Nonostante il carattere miscellaneo della raccolta, che spazia cronologicamente e tematicamente, il filo unitario è rappresentato dal legame che gli aspetti della cultura materiale esaminati, siano essi ex voto o industria litica mostrano con la Sicilia, una ulteriore prova degli stretti rapporti che le due isole hanno sempre intessuto tra di loro.

1

Report on the lithic tools of Sicilian origin from the prehistoric site of Skorba, Malta

Clive Vella

1.0 Terms of Reference

The following report is being submitted as part of contract fulfillment for the Interreg IIIA KASA project. As specified in the services contract, the author is required to:

- identify the lithic material of Sicilian origin from the site of Skorba;
- compile a report on the material analysed.

This collection and presentation of data is part of the Work Package 2, *Censimento di monumenti di eta preistorica, romana e medievale di influenza Siciliana a Malta*. As required by the contract, all imported lithic tools curated at the National Museum of Archaeology in Valletta, Malta were analysed. This data was then inputted into a database (**Appendix 1**) and interpreted in this report. This report explains the main issues, trends, and results which have emerged from the documentation of obsidian and flint tools from the site of Skorba.

2.0 Preamble

2.1 *The Maltese Archipelago and Sicily*

The Maltese Archipelago and Sicily are two distinct islands which maintained contact, either constant or irregular, throughout history. The Maltese Archipelago is made up of three main islands: Malta, Gozo and Comino. These islands are sedimentary in nature, primarily composed of limestone based rock. With an area of 314 km^2 and a relatively semi-arid climate, the biogeographical balance can be easily tipped. The islands' rock horizon is separated into five main horizons: the topmost rock is Upper Globigerina (Tal-Qawwi), Blue Clay (Tafal), Greensand (Rina), Globigerina (Franka) and the bottommost layer is Lower Coralline (Taz-Zonqor). Three out of the five rock types present can be quarried and fashioned for building, as seen in the megalithic temples. The impermeable Blue Clay acts as a water catchment level and, when present in hillsides, it produces a perched aquifer. The geomorphological landscape of these islands is scarred by faults, which were eventually deepened and widened in the last glacial era. These faults are now the widien (valleys) which have perennial water springs during the winter months. These widien act as ecological refuge areas and were frequently utilized as points of access between the coast and the inner areas of the islands. Due to the physical limitations of

Malta, many materials were not available locally. Superior rock types, such as flint and obsidian, needed to be imported for the production of lithic tools.

Sicily is nearly eighty times larger than all of the Maltese Islands together with the nearest continental shore at 3 km in Southern Calabria/[1] Leighton even goes so far as to regard Sicily as a '*southern extension of the [Italian] peninsula …*'..[2] The geological resources of Sicily include obsidian, flint, ochre, and even copper. Several floodplains, such as the Catania plain, are fertile and became prominent settlement hubs throughout different parts of Sicilian prehistory.[3]

It is crucial to note that two out of the three utilized raw materials for lithic tools were being imported from Sicily. This indicates, to some degree, an interaction between the Sicilian and Maltese communities was ongoing to varying fluctuations of cultural contact.

2.2 Skorba: the site

Skorba is a place-name which refers to a number of fields in the village of Mgarr within the northwestern part of Malta (**Figure 1**). The site is placed on the Bidnija Ridge, an upper coralline limestone plateau which overlooks a wide valley and, to this day, is a very productive horticultural area. Additionally, the area is well maintained by a natural hydrological supply.

Capt C G Zammit first documented Skorba in 1937 and described it as a menhir,[4] a Bronze Age standing megalith, site in the early 20th century.[5] After surveying the area, several large blocks were noted in surrounding field walls, as well as a scatter of prehistoric pottery sherds. After a brief excavation campaign in the area, the site was identified as a Late Neolithic megalithic 'temple'. Capt Zammit identified a pitted threshold which he claimed was a probable Temple period structure. Due to lack of funds, the remainder of the site was expropriated and left unexcavated.

In 1961 work resumed under the direction of Dr D.H Trump, who was at that time Curator of the Museum of Archaeology at Valletta. Over three years, several excavation seasons were conducted with the following aims:

- to excavate an undisturbed temple site;
- to better understand the earlier prehistoric periods of the Maltese Islands;
- to uncover charcoal fragments for the application of C^{14} dating.

The uncovered prehistoric remains were impressive. Two megalithic temples were uncovered for the first time surrounded by a multi-phased settlement.[6] The uncovering of

[1] Stoddart 2000: 62
[2] Leighton 1999: 3
[3] Stoddart 2000: 62
[4] Menhir being a standing monolith that is frequently associated to Bronze Age archaeology.
[5] MAR 1937: II
[6] Trump 1966: 50

a multi-phased site helped form a clear cultural sequence for the Maltese prehistoric period.

Additionally, the Neolithic phases of Ghar Dalam, Grey Skorba and Red Skorba are especially important at this site due to their first discovery in a stratigraphic context.[7] The site was abandoned after the Red Skorba Phase, and occupation resumed during the Zebbug Phase. Structurally, the Zebbug phase was not well represented at Skorba. However, a clear stratigraphic relation was uncovered, such as in trench ZA where Zebbug material cut into a Red Skorba deposit and faint traces of a hut wall were observed.[8] More hut remains were uncovered for the transitional Mgarr phase and the Ggantija temple period phase. The settlement fabric experienced a major alteration in the Ggantija phase when a megalithic trefoil temple was built on the higher area of Skorba.[9] Other alterations to the West Temple occurred in the Tarxien phase, which in the Maltese Islands appears to have led to the widespread 'embellishment' of the megalithic temples. During the Tarxien phase the eastern wall of the Ggantija phase temple was demolished to fit in a four apse megalithic temple.[10] However, no further domestic deposits were discovered for the Tarxien phase. A scant Bronze Age reoccupation of the temples was observed at Skorba, a pattern which is also experienced at Tas-Silg, Borg In-Nadur and Tarxien. In the Tarxien Cemetery phase, Skorba underwent a change in the purpose of these megalithic temples which appear to have been used for domestic dwellings.[11] The Tarxien Cemetery appears to have been the last phase of prehistoric occupation at Skorba, after which the site was abandoned.

Skorba is an example of a well planned site. From a physical perspective, the site is placed on a high vantage point in an area which has very good agricultural potential, replenished by the hydrological supplies.[12] Any need for soft stone building material would have had to depend on either the recovery of tough Upper Coralline Limestone from the Skorba area or the procurement of Globigerina limestone from the foot of the Ras Il-Pellegrin hill approximately 3 km away. Clay might have been extracted from Wied Qanotta, about a mile north, or from the Bingemma Ridge a mile to the south.[13] The closest chert source for the production of stone tools is once again at the foot of the Ras Il-Pellegrin hill. Similarly, Gnejna bay, overlooked by Ras Il-Pellegrin, might have very easily acted as the anchorage bay for any vessels related to Skorba.

The building of this temple was no easy feat, as Trump observed: "owing to the natural slope a considerable quantity of soil had to be dug out at the back and built at the front [to form] a terrace ...".[14] Despite the logistical implications of building this temple, the most intrinsically significant building was placed at the highest point possible in visual connectivity with the Ta' Hagrat temple to southwest of Skorba. This conscious

[7] Trump 2002: 58-59
[8] Trump 1966: 14
[9] Trump 1966: 3
[10] Trump 2002: 158-159
[11] Trump 1966: 7
[12] Bowen-Jones *et al* 1961
[13] Trump 1966: 13
[14] Trump 1966: 3

placement of such a multi-phased site is vital to our understanding of the archaeological record.

3.0 Definitions

3.1 Lithic Tools

Lithics is a term derived from the Greek word *lithos*, which is translated as stone. Pre-dating pottery by several millennia, one can easily understand how vital this technology was throughout prehistory. Lithic tools are more commonly known as stone tools. I always like to imagine these tools as an 'extension' to the physical limitations of humans.

Taking up the analogy of lithic tools as modern day cutlery, one can see that the same types of cutlery found in modern kitchens can be compared to prehistoric tools. Simple tasks, such as cutting meat, would become time consuming without tools. Not only can we cut meat but we also have the technological capacity of slicing, scraping and chopping through the use of different utensils. In the same manner, different lithic tools catered to different functions. Archaeology, along with an appropriate study of material culture, encourages, an analysis of each artifact leading into a better understanding of sites and culture in general. Indeed, one could almost say that these lithic tools offer archaeologists the opportunity of comprehending and comparing between different prehistoric systems in terms of extraction, production, consumption, and exchange.[15] Therefore, lithic tools are excellent indicators as to why and how Malta and Sicily interacted during the prehistoric period.

Turning now to the scientific composition, lithic materials fall under two general categories: minerals and rocks. A mineral is a naturally occurring element with a specific crystal structure and chemical composition.[16] Rock is an aggregate of one or more minerals.[17] This means that these rocks are not actually 'pure' and their main combining and determining factor is in the inclusion of a mineral known as a silicate.[18] The structure of these silicates is based on a silicone dioxide (SiO_2) tetrahedron structure.[19] A tetrahedron is a negatively charged ion which tends to combine with others to form minerals. There are five types of tetrahedra, the most important for us being the silica tetrahedra. Examples of this type of rock include chalcedony, flint, chert, jasper and obsidian. During all the prehistoric periods in the Maltese Islands, the communities imported flint and obsidian while also widely utilizing the local chert.

3.2 Obsidian

[15] Kardulias and Yerkes 2003:1

[16] Kooyman 2001: 25. Such an example would be mica or quartz.

[17] Kooyman 2001: 25. Such an example would be limestone or granite, both of which are a mix of several minerals compacted together into one rock type.

[18] Rapp and Hill 1998: 112

[19] Kooyman 2001: 27

Obsidian, like glass, lacks any sizeable crystals. As a result, once the obsidian is struck at the right angle, the force will propagate through the rock quickly without cumbersome crystals hindering or reducing the force's speed of propagation. Thus, extremely sharp tools can be manufactured from obsidian easier than in the case of flint or chert.

Within the Central Mediterranean basin there are four obsidian sources which were utilized and exploited from the Early Neolithic period. From the obsidian sources of Monte Arci (Sardinia), Palmarola, Lipari, and Pantelleria, only the latter two appear to have made it to the Maltese Islands (**Figure 2**). Obsidian, favoured in many prehistoric communities for its aesthetic and precise cutting products, was traded between Sicilian and Maltese communities in some manner or other.

The island of Lipari has four obsidian flows, which lie generally in the northeastern zone of the island, specifically around the modern town of Canneto (**Figure 3**).[20] These obsidian flows were formed in the last 10,000 years, which is also the fourth period of the island's geological formation.[21] The fourth geological period can be sub-divided into two distinct phases between which the volcanoes appear to have been dormant.[22] Lipari obsidian is frequently cited as visually homogenous with a general tendency of lacking impurities.[23] This obsidian tends to be grayish-black in reflected light, whilst it appears to be greyish when held against white light.[24] As in any rock, even the best of sources might be host to impurities, and the Lipari obsidian tends to be marred rarely by impurities made out visually as white lines (**Plate 1**).

Alhough Pantelleria does not appear to have had any permanent settlers prior to the Bronze Age at the village of Mursia, obsidian originating from the island arrived in Malta by 5,500 BC, during the Ghar Dalam phase (**Figure 4**). Obsidian from Pantelleria is identified by its greenish tinge, which results from high ferrosity within the lava prior to cooling.[25] Obsidian from this source tends to be less translucent than the Lipari obsidian, with a matt tinge to it when held at an angle in white light.

3.3 Flint and Chert

In the Central Mediterranean the two largest documented flint sources are the Monti Iblei flint outcrops in Sicily and the Perfugas flint source in Sardinia. However, other small flint sources do exist but are less noted in archaeological literature. For the Maltese Islands, it has been presumed that most imported flint was being extracted from the Monti Iblei, Sicily (**Figure 1**).[26] Up to this date it has never been proven that any

[20] Cavalier 1979: 112
[21] Cavalier 1979: 112
[22] Cavalier 1979: 113
[23] Tykot 1996: 42
[24] Tykot 1996: 42
[25] Tykot 1996: 43
[26] In a conversation with Prof Moscoloni who is the lithic analyst for the Missione Archaeologica a' Malta he expressed his opinion that the Monti Iblei flint do not appear to be the only place from which flint was imported. Rather, there might be other smaller flint sources in Sicily which would explain the variety of flint discovered in different Maltese prehistoric sites.

Perfugas flint arrived on the Maltese Islands. However, the lack of evidence does not necessarily mean the lack of Perfugas flint. Additionally, other lesser known flint sources are located in peninsular Italy, which are in the area of the Lagonara valley in the region of Liguria and also in the vicinity of Mount Lessini in the region of Veneto.[27] Lastly, there is a flint source in the Gargano area close to Foggia in the region of Puglia.[28]

Archaeologists have always considered the importation of flint to the Maltese Islands from these aforementioned sources improbable because they appear to have only had a localized range of distribution. However, we need to consider carefully whether imported flint does or does not hail from the Monti Iblei..[29] To date, no characterization studies have been carried out on flint recovered in prehistoric sites locally. The main arguments used for the flint provenance being from the Monti Iblei tend to rely on:

1. the fact that the Monti Iblei is the closest flint source to the Maltese Islands
2. and that flint was not 'precious', therefore, energy expended into bringing flint from the Gargano or Lipari sources would have been futile.

As noted by several researchers, including Rev Dr Vittorio Rizzone who participated in the KASA research, the Monti Iblei region has had a proficient flint surface quarrying, possibly as far back as the Early Neolithic. However, such activities are difficult to date and identify. This flint surface quarrying has been localized in the Irminio and Dirillo valleys, within the general Monti Iblei region.[30] Paolo Orsi discovered another type of flint quarrying exploitation, or mining, in the Monti Iblei. Furthermore, at Monte Tabuto, Orsi discovered a set of eight mines. Although the date of these mines is surely prehistoric, there is no positive way of knowing when mining commenced. The abandonment, or last phase of mine exploitation, in the case of the Monte Tabuto mines appears to have been the Bronze Age phase of Castelluccio.

Another important consideration is the linguistic problem in the use of the terms chert and flint. Luedtke points out that the earliest reference to flint appeared about 700 AD, whereas chert did not appear in any literature until 1679 AD.[31] The major division in term usage appears to be geographic. Kooyman points out that the term flint 'is not a term [used by] North American geologists'.[32] In American literature, flint does not tend to be mentioned. On the other hand, British literature uses the term flint as referring to dark coloured siliceous deposit found in chalk beds.[33] The term chert is referred to as a lighter coloured, impure, lesser quality material found in limestone beds or as nodules among shale.[34] This report will use a geological interpretation of chert vs flint. The chert found in

[27] Di Lernia and Galiberti 1993: 22
[28] Robb and Farr 2006: 31-33. In a visit to the Gargano area I was told how most prehistoric communities in the area utilized flint nodules, shaped as pebbles, that were recovered from river shores.
[29] Trump 2002: 38
[30] Leighton 1999: 76, personal communication Rev Dr V Rizzone 2006.
[31] Luedtke 1992: 5
[32] Kooyman 2001: 28-29
[33] Kooyman 2001: 28
[34] Luedtke 1992: 6

the Maltese Islands is found within the Middle Globigerina limestone beds,[35] whereas Sicilian flint is found within chalk deposits in the Monti Iblei region.

In fact the easiest way to characterize chert and flint lithic tools are those which still have the cortical skin attached to the dorsal side. If there is no cortical skin left on a lithic tool, any visual characterization is prone to a higher chance of error. From the research which I have been conducting, I have developed some pointers which can aid in the identification of flint and chert:

1. Although colour is a very subjective factor there seems to be a limitation in local chert. Whereas imported flint found locally ranges from honey coloured to blackish, Maltese chert is mostly limited to a range from greyish to black colours.
2. When a flint lithic tool is held against a white light, the edges appear to be translucent. Chert, even when thin at the edges, is opaque, probably due to the higher occurrence of calcium carbonate within the rock.
3. Texture can be also an indicator. Scratching a finger against a chert surface creates a granular feeling. This is most probably due to the calcareous surroundings in which chert was deposited. Flint produces no hindrance to a smooth feel on its surface which is a result of a high percentage of SiO_2.
4. Lithic tools made out of chert show frequent signs of impurities. These range from cracks to areas which include a strong amount of calcium carbonate.

However, a point of warning should be expressed regarding the visual differentiation of lithics. Black flint, both matte and sometimes even glossy, which was imported during prehistory, was observed from the anylysis of Skorba. Whilst this colour is not commonly represented in the local chert, this blackish flint can easily put anyone in doubt as to regards from which raw material the lithic tool is made. A definite requirement for the future advancement of this subject is the undertaking of raw material chemical fingerprinting to lessen the dependency on human judgment and thus error.

4.0 Past work on lithic tools in Malta

In the last two hundred years the archaeology of the Maltese Islands has focused on the megalithic temples debate. These structures dot the islands in clusters which are clearly apparent and significant. However, the desire to expose more and more of these structures led to most of the better preserved and larger structures being excavated earlier on, at a time when archaeology and its field methods were rudimentary to say the least. Therefore, to the detriment of all material culture, including lithic tools, these structures were cleared out unsystematically. Our lack of understanding and comprehension of the discovered contexts make interpretations difficult to archaeologists who, nowadays, attempt to understand culture through prehistoric artifacts.

[35] Bowen-Jones *et al* 1961: 27

Another important aspect to note is that the geological composure of the Maltese Islands is still being scientifically researched, with a great deal of information still being unknown. Several British geographers such as Cooke tackled Malta in the 1800s with the UK's geological framework in mind.[36] This led to the inappropriate use of certain terms, such as 'flint nodules'. This categorization by geographers led to the use of the term by contemporary archaeologists who showed barely any interest in analyzing the lithic tools discovered during excavations. In 1923 Murray published a brief article regarding some lithic tools of interest recovered in the Borg In-Nadur excavations led by herself and Edith Guest.[37] Keeping in mind the early period in which this article was written, Murray did an excellent job at annotating the location from which these lithic tools were recovered. However, no attempt was made at interpretation, probably due to the early stages of her study at the time. Succeeding this publication, no study was carried out on lithic tools. Barely any mention is made regarding lithic tools, except for furtive mentions of flint knives and blades at the several sites excavated by later archaeologists. .

At the ascent of processual thinking, John Evans and David Trump attempted to approach material culture in a fresher and more quantitative frame of mind.[38] As Trump himself describes by the 1950s, several sites had been excavated. However no coherent chronology or interpretation of the Maltese Islands was carried out in a comprehensive manner.[39] Through funds from the Inter-University Council for Higher Education in the Colonies, John Evans managed to write up *A survey of the prehistoric antiquities of the Maltese Islands*. Through the study of ceramics, this monograph proposed a relative, yet sound, chronology. Between 1958 and 1963 as curator of the National Museum of Archaeology, Trump undertook several digs at Borg In-Nadur, Bahrija and most significantly, at Skorba. Fortunately by this time, the technique of radiocarbon dating was utilized for the dating of periods. As it turned out, the Maltese Islands were first colonized by 5,000 BC and not 3,000 BC as supposed by Evans prior to C14 dating.[40]

Despite this advancement, lithic tools were still relegated to a lesser importance in comparison to ceramics, as in the Skorba monograph. One must also realize that hardly any prehistoric sites were excavated after Skorba in the 1960s. The only large scale prehistoric excavation after Skorba is the Xaghra Circle excavations. So far, only the two Zebbug period tombs have been published[41] whilst the Temple period hypogeum site report still awaits publication. Probably due to the limited Zebbug period discovery, no attempts were made by the archaeologists to create a typology or identify any technological trends. Even more recently, the Missione Archaeologica a' Malta have commenced investigations around the prehistoric megalithic temple apse. A review of the prehistoric artefacts recovered by the Italians in the 1960s has recently been published by

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[36] Cooke 1893
[37] Murray 1923: 65-67
[38] Trump 2002: 8
[39] It has to be noted that the excellent work of Ugolini were lost due to his early demise. However, Dr N Vella from the University of Malta is compiling a research that should help us appreciate better what had already been interpreted and recorded prior to WWII.
[40] Trump 2002: 9
[41] Malone *et al* 1995: 323-325

Cazella and Moscoloni. A point of great interest is their recovery of several lithic tools from the Midde Bronze Age phase of Borg In-Nadur. An important aspect of this publication is their stress on edge types to define the functionality of lithic tools analysed.

Therefore, it appears as if no significant amount of past research on lithic tools was undertaken in Malta.

5.0 Methodology

The main interest of this study lies in the undertaking of a formal and systematic lithic analysis. As a means of capturing data, a pro-forma sheet was developed which can be seen in **Figures 1 and 2**. Thankfully, I benefited from several discussions of great interest with competent archaeologists such as Dr J Conolly of Trent University, Canada and Prof M Moscolono, Universita Della Sapienza Roma. A major point of interest which emerged was that no formal way of recording lithics exists, due to regional and research agenda differences. Indeed, American literature on lithic tools tends to frequently concentrate on tool types which are purely North American, for example the Folsom Points.[42] Therefore, my pro-forma sheet that was set up concentrated on recording attribute variables that are inclined towards understanding utilization and technological strategies. All of these basic variables were purposely chosen because they can later be investigated further in different ways in more specialized lithic studies.

The pro-forma sheet is divisible into five areas which cover several lithic attributes and are considered generally relevant. The front page areas are: Basic Information, Raw Material Type, Dimension, Identified Features and Edge Features.

Within the Basic Information section are five data entry points which are as follows: Site, Stored, Storage Code, Lithic Number and Excavator/s. At this point, the latter two fields need to be clarified for the site of Skorba. Whereas nowadays lithic tools would be ascribed a special find number and recorded in position, this was not the case for the excavations in Skorba during the 1960s. Every lithic tool had its number inked on the ventral side of the tools. For example, for SKPD4(12) SK refers to the site, PD is the trench code and 4 is the deposit number. A running number for each lithic from each deposit was given to all the lithics and inked in brackets after the deposit number, (12) as in the example give above. The excavator/s entry point was devised with recent excavations in mind, such as Tas-Silg (South) where all recovered artifacts have their discoverer acknowledged. In the case of Skorba this detail was missing, and therefore, the initials of the site director, David Trump, were used instead.

A significant part of the pro-forma sheet is the Raw Material Type area. This part is especially important due to archaeological interest lying in understanding raw material differences in the local lithic industry. Even though the basic visual differentiation between obsidian and flint is relatively straightforward, the difference between the latter and the local silicate chert is rather complex and can be subjective.

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[42] Odell 2004: 5

Another issue of important value to the KASA research is that the current mainstream method of lithic analysis in the Central Meditarranean might be biased, and possibly even flawed, when utilized in different countries. The understanding of a lithic tool's use can be basically inferred on two principles, function and morphology. Function mostly refers to the edge layout and retouching which might embellish a lithic tool. This method is heavily dependent on making analogies between modern day and lithic tools. Morphology attempts to reduce over assumption and focuses on the shape that the lithic tool was fashioned into by the human agent. Andrefsky explains that lithic tool function is dependent on its morphology.[43] If the shape of the lithic had to be altered, then the function of the tool would change too.

After thoroughly researching the issue of morphology, I decided to adhere to the American typology, as proposed by Andrefsky.[44] The primary distinction is between tools and debitage. In this report, a tool is defined as any lithic piece which contains attributes indicating usage by humans. Debitage is any lithic which is removed during the knapping process and discarded due its inadequancy for use.[45] A note of caution has to be expressed at this point. At the post-excavation stage debitage tends to be simply labelled as debitage and stowed away. However, from debitage archaeologists can learn a great deal in terms of behavioural patterns associated with artifact function, production efficiency, and use.[46]

For the benefit of the reader, the following are all the functional lithic tool types encountered in Skorba during analysis: unidirectional and multidirectional core, blade, sickle, debitage, denticulate, flake tool, knife, microlith, scraper, awl/burin, and unknown. Blades is sub-categorised into backed blade or bladelet whilst scrapers is sub-categorised into round scraper, side scraper, transverse scraper, and thumb scraper.

The next area of the pro-forma sheet deals with the recording of dimensions (**Figure 5**). An integral part of this research was the assessment of technological aspects, especially since several claims have been made in the past by archaeologists regarding the inferior knapping quality of Maltese lithic tools. Therefore, to properly cater for this research question, the maximum length and width, the mid-point thickness, and maximum thickness were recorded. Whilst recording the maximum length and width is a normal part of documentation, the mid-point thickness was collected in order to gain an average thickness at the middle point of the lithic. The choice of this point is dependent on the fact that, due to the laws of physics, any kind of force will start to lose its strength once it goes beyond the mid point of a core.

Proceeding to the identified features section, we start entering the more technical area of the sheet (**Figure 5**). After recording whether the ventral (inner side of the lithic) and the dorsal (outer side of the lithic) side are present or not, I recorded any striking platforms or bulbs of percussion which were observed during the analysis. For the benefit

[43] Andrefsky 1998: 29-30
[44] Andrefsky 1998: 74-75
[45] Andrefsky 1998: 75. This means that the term debitage constitutes anything from a big chunk broken off during knapping to a chip falling off during edge retouching.
[46] Andrefsky 1998: 76

of the reader, I considered four types of striking platforms: flat, complex, cortical, and abraded.

An important entry point for interpretative purposes is the Primary/Secondary/Tertiary Flake. This entry point is a way of systematically stating how much, if any, cortical skin is left on the dorsal side of a lithic. If more than 51% of the dorsal side is covered in cortex, the lithic is labeled as a primary flake. A secondary flake is anything less than 50%, and a tertiary flake has no cortical skin left. This entry point is very interesting since a large amount of primary flakes from a particular site or stratigraphic unit would indicate that nodules were being brought to the site without any prior reduction, which in turn would make the carrying load heavier.

The final part of the front page is the documentation of any edge attribute observed on the lithic tool. Retouching, an intentional type of modification to a lithic tool edge, is foremost amongst the attributes of interest in lithic tools. Not only is intentional retouching is proof of conscious planning during lithic production, but also, in the case of the Skorba lithic industry, retouched lithic tools are rare and mostly observed on flint and obsidian pieces. Indeed, this modification is dependent on the desired tool type.[47] The modification of the marginal edges can be either done unifacially or bifacially. A unifacial retouch includes the modification of just one edge surface, whereas a bifacial retouching includes the modification of both edge surfaces.[48] Retouch can be produced by either pressure flaking or percussion flaking. Pressure flaking is very much dependent on pressure application and bending at a flake edge.[49] This pressure is generally applied by a sharp indenter, and (from personal experience) not much force needs to be applied. As to ensure that the edge is properly retouched, an abrader can also be used to prepare the edge for retouching. On the other hand, percussion flaking is generally done by a soft hammer for the production of bifacial tools.[50] It has to be remembered that both primary and secondary retouching exist. Primary retouching is the first event of retouching, whilst the secondary retouch is applied to the flake when it becomes either blunt or its tool purpose is changed by the user. The identification of these two is very much dependent on the capability and knapping experience of the analyst, but secondary retouching tends to leave scars on the primary retouching on a flake.

For this research, retouching was categorized as invasive parallel, invasive, stepped, or irregular retouching (**Figure 7**). Invasive parallel retouching is a parallel retouching which goes into the edge less than 4 mm. Invasive is retouching which goes into the edge up to 4mm. On the other hand, stepped retouching is retouching which looks almost like cascading steps. Irregular retouching tries to give the lithic tool a better edge for whatever purpose the tool is used for, however, no uniform pattern is reproduced.

An arising point of interest in lithic analysis is the study of termination types presented in different lithic tool assemblages. As already mentioned above, the detachment stage of a flake comes under a new set of forces. These same forces are of high interest to this

[47] Odell 2004: 65
[48] Odell 2004: 65
[49] Whittaker 2001: 133-134
[50] Whittaker 2001: 185

research since through termination statistics one can very easily identify the methods of flaking used in general by a group of people.

Termination is dependent on the direction of the applied force and the amount of force applied.[51] By combining the research of Andrefsky, Kooyman and Cotterell, this report uses four termination types: feathered, stepped, hinged, and plunging (or outrepassé) (**Figure 8**).

Feathered termination is produced by the flake becoming gradually thinner and thinner until the distal end of the nucleus is reached and detachment is complete.[52] The angle of force has no preferential mark and Cotterell and Kamminga have confirmed this through their own experiments.[53] A feathered termination is, in fact, proof of continuous force propagation,[54] such as that produced by a constant stiff force.[55] A stepped termination is frequently an indication of an abrupt drop in force, which forces a right angle fracturing to occur.[56]

When a flake fractured is formed close enough to the surface of a nucleus, the fracture can approach the nucleus distal end roughly at a right angle causing fracturing.[57] This right angle fracturing should not be compared to the step fracturing since this hinged fracturing is more rounded according to Kooyman.[58] Prior to the change of direction, Cotterell and Kamminga noted a sharp drop in velocity which might account for the rounded corner rather than an actual right angle that depicts a much more abrupt velocity halt.[59]

An overshot termination is formed by the increase of a bending force that causes the forming flake to turn toward or away from the nucleus edge.[60] Cotterell and Kamminga also cite the end of the nucleus as a valid factor.[61] This plunging effect seems to be intensified if the nucleus end is a sharp corner.

The back page of the pro-forma sheet is geared towards the documentation of relevant lithic tools, details such as photography, initials, and date of recording (**Figure 6**).

6.0 Presentation of data and results

6.1.1 Obsidian lithic tools

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[51] Andrefsky 1998: 28
[52] Kooyman 2000: 19
[53]119 Cotterell and Kamminga 1987: 699
[54] Andrefsky 1998: 28
[55] Cotterell and Kamminga 1987: 699
[56] Kooyman 2000: 19
[57] Cotterell and Kamminga 1987: 700
[58] Kooyman 2000: 19
[59] Cotterell and Kamminga 1987: 700
[60] Andrefsky 1998: 28
[61] Cotterell and Kamminga 1987: 701

Obsidian is a superior quality material which is favoured by many modern knappers. Despite the limited points of availability, obsidian traveled from places such as Pantelleria up to the southern French region of Provençe. In a brief study which I had submitted to the University of Malta as a thesis for my Bachelor of Arts in Archaeology, it was concluded for several reasons obsidian was valued higher than any other lithic raw material. Indeed, its recovery in the Central Mediterranean archaeological record was either focused on specific tool types, such as projectile points, arrow heads, blades or knives, or else in minute fragments due to over utilization. The case for Skorba shall be examined from two points of view. First, I shall try to highlight any typological patterns which were in consistent occurrence at the site. I will also try to understand how the repeated manufacture of the same lithic tool types can lead us into an interpretation of how choice and demand influenced the final product.

6.1.2 Typological Considerations

Charts 1 and **2** show the reader that the most represented obsidian source in Skorba during prehistory originates from Lipari in the Aeolian Islands. This trend was already expressed by Dr Trump in the site report.[62] However, I would like to avoid discussing the quantity versus phase table which was presented in Dr Trump's. The phasing of deposits by Trump is not present in his notebooks, and therefore, it makes the task of evaluating his chart rather impossible and over-assumptive for a researcher who was not present during the excavations. Therefore, I will attempt to set up a typology for obsidian lithic tools in Skorba by discussing the morphological and functional tool types as already done for the flint lithic tools.

Keeping in mind that obsidian must have been rather finite, it comes to no surprise that the least recorded tool type for obsidian lithic tools is bulky shatter. The only piece catalogued as a bulky shatter is SK GB2 (5). This classification was given on the premise that the lithic tool (SK GB2 (5)) was larger than average and fitted under no other morphological debitage classification. Once again, as is the case for the flint flake shatter, it is even more difficult to differentiate between the waste from lithic manufacture and snapped lithic tools. The case for obsidian is even clearer due to the minute sizes in which they were discovered. At least 80% of the obsidian flake shatter pieces were observed to have flake scars on their dorsal sides. The majority of these scars were multidirectional, possibly indicating that the obsidian knapping was either unplanned or else the cores were being maximised. There are several variables which might have been accountable for this aspect. Probably the most logical interpretation can be identified as the limited obsidian quantities. Cores were knapped in more than one direction so as to increase the productivity, despite that such a multidirectional knapping tends to decrease the flake length. Since proximal flakes are less represented than the flake shatter, this can possibly indicate that the hammer utilized for obsidian manufacture was too hard and tended to shatter the upper part of the lithic. Additionally, the detached obsidian pieces were too thin and utilized for a prolonged period of time. As a consequence, these tools snapped on both the proximal and distal ends. Indeed, a small minority of obsidian flakes had either the distal or proximal ends present.

[62] Trump 1966: 49

Two exceptional cases require further description. SK VE 4 (8) and (15) are two obsidian cores from Lipari and Pantelleria, respectively. These cores are 7.8 and 10.0 cm in length. The percussion marks on both cores indicate that knapping was multidirectional. As already discussed in the previous paragraph, a multidirectional core can indicate several variables. Commencing from SK VE4(8), the Lipari core, only one out of three sides had parallel lines of blade detachment. This core had evident steep sides which could indicate that the knapper was trying to start another striking platform. SK VE4(15), the Pantelleria core, is larger and bulkier than the Lipari core. However, it lacked any distinct flake detachment scars. Although this core was discarded, it was still in an utilizable stage.

Despite that most obsidian lithic tools have been recorded as debitage, a strong trend towards the production of blades can be seen in **Chart 3**. My interpretation is the prehistoric community was strongly aware of the advantages of obsidian. It appears as if they realized its potential for slicing and the limited availability required a cautious use. Therefore, since neither flint nor chert could produce such thin, sharp implements, obsidian must have been reserved for these requirements. Considering the small length of the obsidian pieces, I have two other observations. First, these pieces were recycled until they became nothing more than a minute fragment, thus confirming my previous statement. It appears as if these obsidian pieces are in most instances too small to have been hand held. Therefore, hafting of these pieces might have been the case. Unfortunately due to the small size of the obsidian lithic tools, this factor can not be proven or disproven.

6.1.3 Technological Considerations

In comparison to flint, obsidian pieces were recovered in small sizes (**Chart 4 and Plate1**) which are below 2.5 and 1.5 cm in length and width, respectively. This average is being interpreted as a strong curation which must be related to the ascribed value. From the length and width of the obsidian pieces, it also seems that the hammering device used was, more than likely, not a pebble. This can be also compared to the fact that the obsidian lithic tools analysed did not contain any signs of a bulb of percussion. When observed in a pronounced form, a bulb of percussion indicates that the knapper utilized a hard hammer which would had introduced a large sudden force and expanded the force's propagation.

Due to the fact that obsidian does not generally have a distinct cortical skin, it is impossible for us to assess transport logistics through the percentage of cortical skin on the dorsal side.

Furthermore, the termination of obsidian pieces is relatively straightforward in comparison to flint. The majority of the termination types were classified as unknown due to the difficulty in 'reading' the minute obsidian lithic tools. In some instances it was impossible to even make out which side was ventral or dorsal let alone interpret which kind of termination was present on this lithic tool.

6.2 Flint Lithic tools in Skorba

6.2.1 Flint Lithic tools

The most striking difference between flint, chert, and obsidian is the texture and strength of the material. Flint, being a metamorphic rock type, is a well matured material which does not snap as easily as obsidian through use. The texture of flint, despite the evident crystal inclusion, must have been recovered from an optimal flint source. The imported flint appears to have been examined for any cracks or impurities prior to importation. Of course, this all makes perfect sense due to the fact that it would have been impractical to import material of a lesser quality.

6.2.2 *Typological Considerations*

The typological examination of flint tools from the site of Skorba is conducted irrespective of different periods or contexts. **Chart 5** shows the amounts of morphological tool types observed and recorded. **Chart 6** presents the situation recorded for functional tool types across the whole prehistoric period at Skorba.

Starting from the morphological tool types, small amounts of flint bulky shatter pieces were deposited at Skorba. Bulky shatter implies that the lithic tool was longer than 5-6 cm in length and/or wider than 3 cm. Therefore imported in a rather 'chunky' state, we can identify the high value which must have surrounded this lithic. Of even greater interest is the fact that the lithic tools SK SB 3 (4), SK ND5 (142), SK WE3 (229), SK LB4 (37), SK F6 (2) and SK LC2 (22) are all large debitage pieces. However, they are in a minority amongst all the other flint types. These pieces indicate that flint cores were have been imported into the Maltese Islands, and therefore, these pieces are discarded reductive flakes during the knapping process.

Flake shatter represents the majority of all flint pieces recovered at Skorba. A drawback of lithic analysis is strongly experienced when analyzing debitage since we are seeing the last stage in an artifact's use life. Therefore, these 140 flint flake shatter pieces are definitely not all waste from lithic manufacture but could also be discarded artifacts which have become too worn or broken through intensive use. Indeed, the latter line of thought shall be further developed in the functional tool type interpretation.

Proximal flakes, being debitage pieces which still contain a striking platform, are a different matter. Turning once again to flake fracturing mechanics, if the perfect core had to be struck at the perfect angle, a perfect flake would be fractured off. This supposedly perfect flake would in turn have a striking platform and a bulb of percussion. In the light of this, considering that the proximal flakes make up about 16% of all flint debitage

pieces, it means that such a perfection is rare. Once again, a point which might need further study in the future is that the hammering agent was not a pebble, but rather a softer material, such as wood or antler.

Turning to the identified lithic tool pieces, there is an apparent trend towards unimarginal flake tools. These unimarginal flake tools are mostly composed of wider tools which are mostly meant for heavy duty jobs such as scraping or cutting vegetables. In fact, these tools are task specific in comparison to the bimarginal tools observed. This means the requirements or tasks for which flint was utilized was well planned out, an aspect that comes to no surprise considering the fact that flint was limited. The bimarginal flake tools make up 22% of all the actual flint lithic tools recorded from Skorba. They are mostly blank with no intentional edge retouching and smaller in size. These tools appear to be more multi-tasked, yet, finer knapped products. I interpreted these tools' edges as clear slicing tools which would have been used on meat and soft fibres. This presence at 22% can also be explained as a consequence of having obsidian and utilizing the latter for slicing motions.

Flake tools were differentiated from the other lithic tools on the principle that their workable edge was a product of knapping and not intentional retouching. However, this does not mean that they were not utilized. In fact, tools falling under 'Flake Tools' are problematic in the sense that rarely can the analyst identify whether the tool was utilized or not. In a comparision of flint and chert flake tools, an amount of curation is visible in the former. This quite logically signifies the value of flint was indeed higher and differentiated from that of the local chert.

Turning to lithic analysis from the point of view of function, an interesting picture emerges. Once again debitage pieces make up the largest amount of flint lithic tools analysed. Not surprisingly, the same argument which was used for the morphological debitage pieces is also valid for the functional debitage lithics. The difference between the flint blades and bladelets is mainly size. A normal blade is beyond 3 cm in length whilst a bladelet is anything less. It is interesting to note that a normal sized blade is between 4 and 6 cm and can be easily hand held. Strangely enough, in all the lithic tools recorded, no evidence of hafting was recorded. Although hafting might very well be slightly intrusive and hence less eye grabbing, one should be able to observe a ground notch in the proximal part of the tool. This lack of hafting might indicate that lithic tools were hand held for the most part and discarded once they became too small. However, one flint bladelet (SK OE 4 (1)), as well as the other five obsidian bladelets, might indicate there were composite tools in prehistoric Malta. An important side note is the site formation processes are not particularly 'kind' on such tiny artifacts.[63] This lack of hafting might also be due to the fact that the prehistoric community in Malta developed its own type of serrated implement, which I refer to as a denticulate tool. This tool has a prominent horizontal crushing of the edge to produce a dent, or several dents, which would make such a lithic tool better at cutting strong fibers. Since the classic case of a

[63] Trump 1966: 10, I would like to point out that, for example, the Ghar Dalam hut was found at 'very little at the bottom of the ploughsoil'. Referring to Fig 10 in the same monograph one can see how such a hut was discovered under less than 40 cms.

composite tool tends to be a sickle made up of tiny bladelets fitted into a wooden or bone handle, tools such as a denticulate flake would replace this function without having to go through the maintenance which a composite tool requires. The lack of hafting evidence was also observed in the scraping lithic tools recorded from the Skorba collection. All of the scrapers are easily held with three fingers and all scraping appears to be done by hand. Due to the expected steep edge in a scraper, it was noted that many of these tools were discarded as soon as the edge became impossible to retouch further. This highlights the aspect that tool curation was exhausted until its last possible resource, as already discussed in the obsidian section.

Attempting to create a representative typology of flint assemblages discovered at Skorba was not easy, due to the fact that these tools were exploited to the extreme. However, briefly comparing the flint finds to the chert lithic tools, there is most certainly a finesse in the production of specific scrapers and cutting implements which is not present in the chert tools. The most representative and distinctive flint lithic tools observed are the blades and knives which are rarer and less refined in the chert lithic tools.

7.2 *Technological Considerations*

A further evaluation of the collected data is to be directed towards the length and width of the lithics, their dorsal skin and termination type.

All of the blade, backed blade, and broken blade pieces are twice as long as wide. This makes these lithic tools the longest pieces recorded between flint and obsidian. However, in comparison to the sizes, especially achieved in chert bulky shatter, flint is rather small. This trend shows that the flint core length is not likely to have exceeded by far the average length and width identified in this exercise (**Chart 7**).

Unsurprisingly the flint debitage scaled at an average of 2.33 by 2.12 which seems to sustain the argument that the imported raw materials were curated until their maximum use life. At the end of this use life, their importance and use would be null. Scrapers were wider than all the other flint tools and tended be beyond 2 to 2.5 cm in width. Indeed, such a tool type would require a strong profile to sustain the strong pressure applied for a scraping motion. Therefore, as can be easily seen, the average length and width actually support my classifications of tool types and appears to link flint tools with a specialized manufacture, almost certainly due to its ascribed value.

Pursuing even further the question of value, were the Sicilian counterparts exchanging the flint pieces in an already worked form, an unprepared core, or as a prepared core. Examining the count of primary/secondary/tertiary flakes, one is bound to seek the resounding majority of tertiary flakes as having been somehow prepared (**Chart 8**). The absence of any flint cores might hint towards the scarcity of the material in Malta in that form.

For the most part, the distal termination of flint flakes is broken. Thus, the propagation of the force was either uneven or else the raw material contained some impurities. At least through my observations, the imported flint does not appear to have any significant flaws, as is the case for the local chert. Most significant is the fact that an ample amount of broken flint flakes appear to have snapped through use. The most common termination type is hinged. As already explained before, a hinged termination hints towards a sudden halt of velocity close to the distal end of a lithic tool. Considering also that most of the proximal ends have no striking platform, it would almost appear as if the knapper was introducing too much sudden force upon striking which meant that the force was initially strong and then quickly subsiding.

7.0 Discussion of results

Considering that Skorba was a domestic settlement for the majority of its history, any interpretations which are suggested require a strong consideration in the formation processes that led to the archaeological record.

Attempting to identify the difference in value ascribed to obsidian and flint appear at first sight to be a relatively easy feat. One would be tempted to identify obsidian as more valuable than flint considering the reduced numbers present at Skorba. However, I would like to discuss a comparative typology. The easiest manner of setting up a typology is by classifying according to the edge.[64] Furthermore, the edge can be sub-categorised dependent on the motion for which it was utilized: scraping, cutting, serrating, slicing, and perforation.[65]

Referring once again to **Chart 4** obsidian, in comparison to flint, appears to have been utilized for thinner edges which might indicate slicing. This aspect might be explained by two variables. Obsidian flakes tend to be at approximately 0.3 mm in width, whereas the flint average width is at around 0.5 mm (**Figure 9**). This variable is also linked to the material in itself. Recalling that no obsidian lithic tool had intentional retouching observed on the edges makes this point even more compelling. Flint, despite being of a high quality, contains discernible crystals and faults. Obsidian, on the other hand, is a glass like material which does not contain visible crystals. Therefore, tool production efficiency is theoretically higher in obsidian. Once again, recalling the fact that obsidian had a prominent distribution across all of the Central Mediterranean, it is easy to argue that the inherent qualitative advantages of this material were grasped early on during the Neolithic, making it an 'expensive' object to obtain.

If attempting to categorise the obsidian and flint lithic tools according to the edge's use type, it appears our situation is relatively simple. All of the obsidian tools which fall underneath blade, bladelet, blade (broken), bladelet (broken) and flake tool, can have their edge categorized under the slicing type. This means that in no possible way could the lithic tools discovered have been used for serrating motions, which would had

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[64] I already explained prior that a functional classification of lithic tools might be biased by modern analogies.
[65] This method was passed on by Prof Moscoloni from the Missione Archaeologica A' Malta.

required a serrated retouch. A questionable aspect is whether some of these obsidian tools would have formed part of a composite tool, such as sickles. Considering that our only retouched obsidian lithic tool is SKCB 4(7), our possibilities of understanding are slim. This lithic tool is a bladelet and could have very easily been part of a composite tool. Joining this observation with the fact that obsidian lithic tools have been recovered in very small pieces, it would appear as if we might be faced with the following situation:

1. Obsidian lithic tools were, for the most part, exploited for their best properties. Hence, knapping was geared towards an efficient production of thin cutting implements. Such a manufacture process must also be seen from the point of view of limited availability. By knapping thin implements, the core can be utilized for a longer span of time.
2. This concern for maximization of the obsidian raw material can be interpreted in two ways. First, the dorsal side of the obsidian tools contains multidirectional scars from previous flake detachment. This can be interpreted as a previous multidirectional core. Such cores usually indicate that the knapper was not willing to allow the core sides to become too steep, upon which it would be discarded. It was rather imperative that the core is maximized until it proves to be impossible for further use. Secondly, we can also see the trend of maximization from the prolonged use-life which obsidian tools underwent. The discarding stage is much longer than of chert, or even the imported flint.
3. The obsidian tools were analysed at their last stage, in which they became unusable. Despite this, it is still evident that the edge type is confirming that obsidian was used for specific tasks. I would like to add that the observation of only one retouched piece does not imply an unretouched assemblage. This point requires further examination against other obsidian finds in Maltese prehistoric sites.

The observations for flint somewhat differs from the obsidian patterns. Probably due to the rock type difference, flint was chosen and exploited for 'sturdier' tool types which require a thicker edge (**Figure 10**). Indeed, in comparison to obsidian, the flint finds include the following sub-categorisation:

- Scraping implements- Round scraper, scraper (broken), side scraper, transverse scraper and thumb scraper.
- Cutting implements- Blade, blade (broken) and flake tool.
- Serrating implements- Backed blade and denticulate flake.
- Slicing implements- Bladelet and microlith

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The only edge type not observed during my analysis is the perforating implement type. These types of implements were only discovered for chert tools, and even then, their production was rather crude. From the above summarization, the following patterns should be discussed:

1. Flint breaks in a more uniform manner than chert, however, it is difficult to attain obsidian's thin edges. It is also important to note that flint, even in thin sections, is not easy to fracture. Therefore, I believe that this quality was observed by prehistoric communities and exploited.
2. I observed retouching in the flint lithic tools, which is required when the section is not as thin as the obsidian tools. This retouching was parallel and produced in light of what the lithic tools morphologically appeared to be. For example, if the flint flakes fractured had a steep edge, they retouched it for scraping motions. The flint implements were intentionally retouched in the light of what the knapping was yielding.
3. The flint lithic tools also underwent a prolonged use-life, though not as prolonged as the obsidian tools. At first thought I am tempted to cite the difference in value. However, I must also add that materials such as flint, chalcedony, jasper and chert do not have the same edge properties as obsidian. From personal experimentation, there is a stage when even a flint blade, or any other cutting tool, is retreated so much inwards due to constant re-sharpening that at one stage the edge becomes too steep. At this point it becomes impossible for the edge to be re-sharpened. Therefore, I would rather add these two reflections together by saying that, indeed, flint was less valued than obsidian but its recycling possibilities were reduced in comparison to the latter.

There is one clear difference between the obsidian and flint lithic tools recovered from Skorba, cultural choice. Value is only an added part of choice. Although archaeologists have attempted to understand imported lithic tools from the perspective of availability or value, it is still completely determined on the final decision of the prehistoric communities in the Maltese Islands. Their understanding of the inherent qualities and the differences between obsidian flint and even chert was well understood. This understanding led to the setting up of a toolkit which was entirely dependent on the most distinct factor between the three materials, that is, their fracturing patterns. After the edge consideration there should be any doubt that there was a conscious choice for manufacturing patterns.

8.0 Conclusion

Despite the fact that travel and its logistics must not have been easy, prehistoric communities managed to acquire and import raw materials which were not available in Malta. For several decades archaeologists have assumed that the decline in obsidian and flint from the Early Neolithic to the Late Neolithic was related to the development of the megalithic temple culture in the Maltese Islands. Despite this change in religious manifestation, a wider analysis of the imported raw materials has given us the impression

that availability with the site of Skorba was always limited and exhibited in extreme tool curation.

Even though obsidian and flint were both imported from the Sicily area, I have tried to show how these two raw materials were exploited in different manners. Almost definitely, the different exploitation was dependent on the knapper's understanding of the different inert qualities that obsidian and flint have. However, cultural choice must have played a crucial role in the exploitation pattern.

Lithic tools can provide insights on human behaviour. In turn, human behaviour implies that more than one human played a role with this process, and therefore, interaction is essential. Lithic tools are a distinct product of humans which required travel over landscape, interaction between societies, importation, and finally consumption. This report attempted to summarize about 450 obsidian and flint lithic tools. It is of course obvious that I could not do justice to every single lithic analysed and recorded from the Skorba excavations. However, I believe that by describing and interpreting the trends I am moving the pawn a step closer to the other side of the chess board.

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Appendix

Glossary of Terms

Apse: is a semi-circular recess.

Assemblage: a group of contemporary artifacts that can be considered a single unit for appropriate recording.

Backed blade: is a blade that has one retouched edge and the other edge left blunt for better holding.

Biface: a lithic tool that has two retouched surfaces.

Blade: a lithic tool that is twice as long as it is wide. Usually used to cut through soft tissues

Bladelet: a blade smaller than 5 cms long. This term is interchangeable with microblade.

Bulb of percussion: a cone-shaped bulge on the interior surface which is a result of the fracturing of the detached piece

Chert: is the main siliceous material for rocks from a microcrystalline background. This material tends to be found within limestone deposits.

Composite tool: is a tool that combines different materials such as bone and lithic tools to make harpoons or sickles.

Compression rings: found on the interior surface of the detached piece compression rings radiate out from the striking platform. These ripples occur when the core is made up of a mineral that has a high SiO_2 content.

Core: this is the nucleus from which pieces are detached through the use of billets/hammers.

Cortex: is a skin layer from the overlying deposit above the chert/obsidian/flint. Usually cortex acts as an impediment to uniform fracturing when present. Also referred to as cortical skin.

Curation: is a term applied widely by Binford in the 1970s referring to the over exploitation of lithic tools based on availability or value of the original material.

Debitage: is debris discarded during knapping activity. Frequently these pieces are scrap material which was of no use at all.

Denticulate Flake: refers to lithic tools that have thin edges with one or several notches on the lithic's edge. Tends to be utilized for cutting wheat and such.

Distal end: is the lower point of a flake where it terminates and breaks off from the main core/nucleus.

Dorsal surface: is the face where the outer surface of the core stood prior to flake fracturing.

Flake tools: refers to lithic tools with unretouched edges that have been utilized as general implements with no specific functional use.

Flint: this siliceous raw material recovered from chalk deposits; falls beneath the wider chert branch (a set of rocks made out of microcrystalline quartz).

Hafting: is meant to produce a handle area of a lithic tool to help movement.

Knapping: is the term that refers to the making of tools, hence, a person making lithic tools is called a 'knapper'.

Megalith: literally means big stone. It tends to refer to large stone architecture such as the Maltese megalithic temples.

Microlith: a tool that is usually less than 5 cm long usually in geometric form.

Morphology: refers to the general shape into which the lithic tool was fashioned. Archaeologists such as Andrefsky feel that this criteria is less biased than functional analysis.

Nodule: is frequently used as a word instead of core. The meaning remains the same.

Obsidian: a siliceous material produced from slow cooling lava.

Percussion flaking: is the knapping by hammers such as pebbles or deer antler.

Pressure flaking: is the knapping by pressure application on a core edge.

Processualism: also referred to as the New Archaeology in the 1960s and 1970s was grounded in a scientific examination of culture change in past societies.

Projectile point: is seen as a weapon tool, known by the more generic terms of arrow, spear or dart.

Proximal end: is the point where the indenter hits upon the upcoming flake.

Radiocarbon Dating (C_{14}): was developed by Williard Libby in 1949. This dating is based on the measurement of the C_{14} isotope's half life. Commonly used for archaeological dating.

Retouch: is intentional modification of the tool edge so as to help its cutting for specific material. For example a serrated edge is more capable of cutting through hard muscle tissues, whereas steep retouch is used to scrape off animal fat from their hides. Retouching can be either unifacial or bifacial.

Scraper: is a tool designed to scrape material such as bone, wood or fat. The edge of this tool is distinctly steep. According to the location of retouch on the tool scrapers are sub divided in end scraper, side scraper, transverse scraper or all round scraper (meaning all round retouching).

Striking platform: is the place which is hit by the hammerstone or billet
Termination

Tools: can be divided in two segments; formal and expedient. The formal lithics tools are those that follow certain symmetrical and typical tool forms, whilst an expedient lithic tool is one that has been chosen from the scrap heap due to its potential in being used (also known as opportunistic).

Typology: is the classification of objects by sub division based on chronology or series of groups.

Ventral surface: is the new surface which is produced by flake fracturing on the inside of a flake.
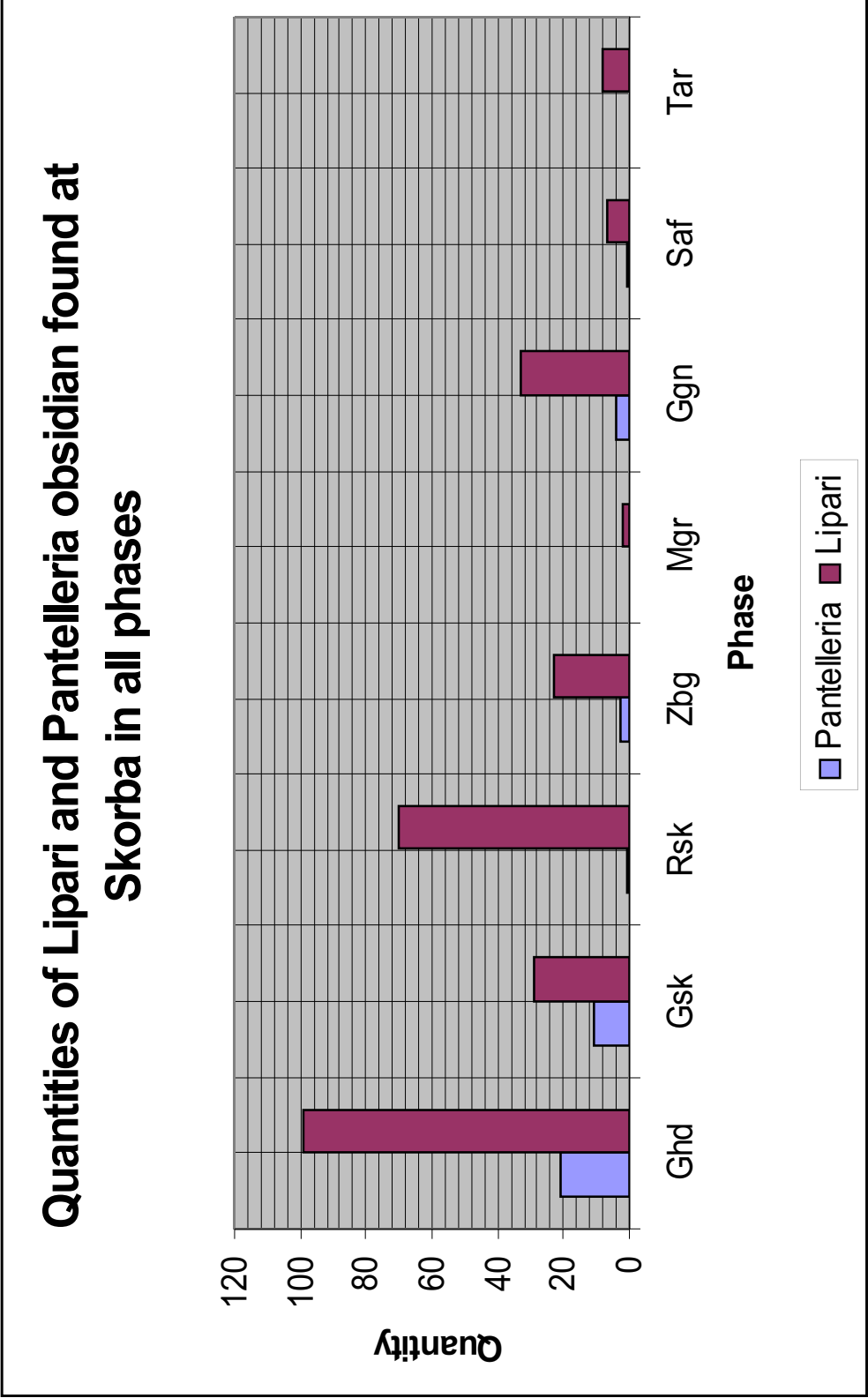
Chart 1:- Chart showing the relative quantities of Lipari and Pantelleria obsidian found at Skorba according to Dr Trump.
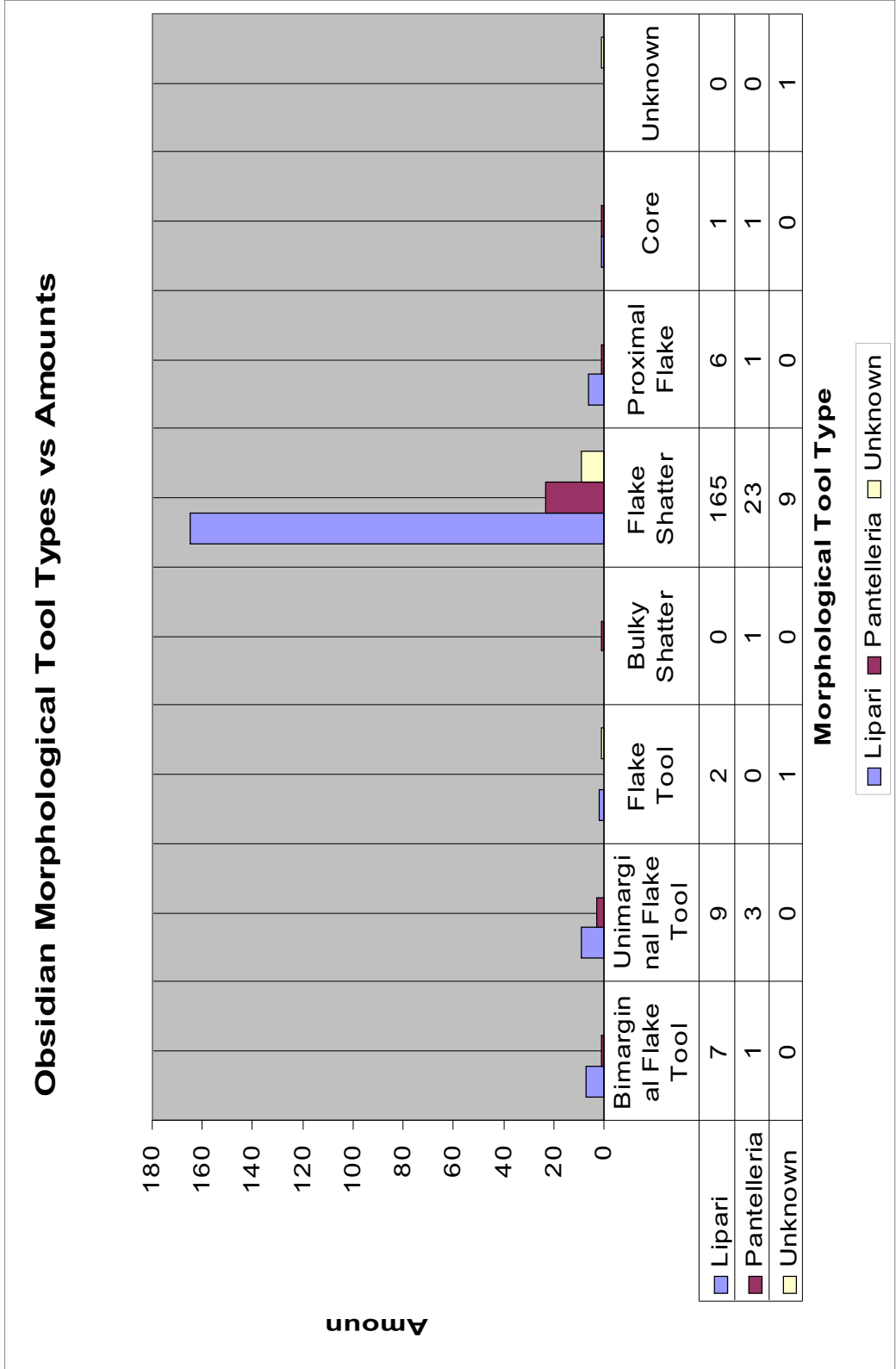
Chart 2:- Chart showing the relative quantities of the obsidian morphological tool types.

	Blade (Broken)	Bladelet	Bladelet (Broken)	Debitage	Flake Tool	Unknown
Lipari	12	4	2	169	2	0
Pantelleria	3	0	1	25	0	0
Unknown	0	1	0	9	0	1
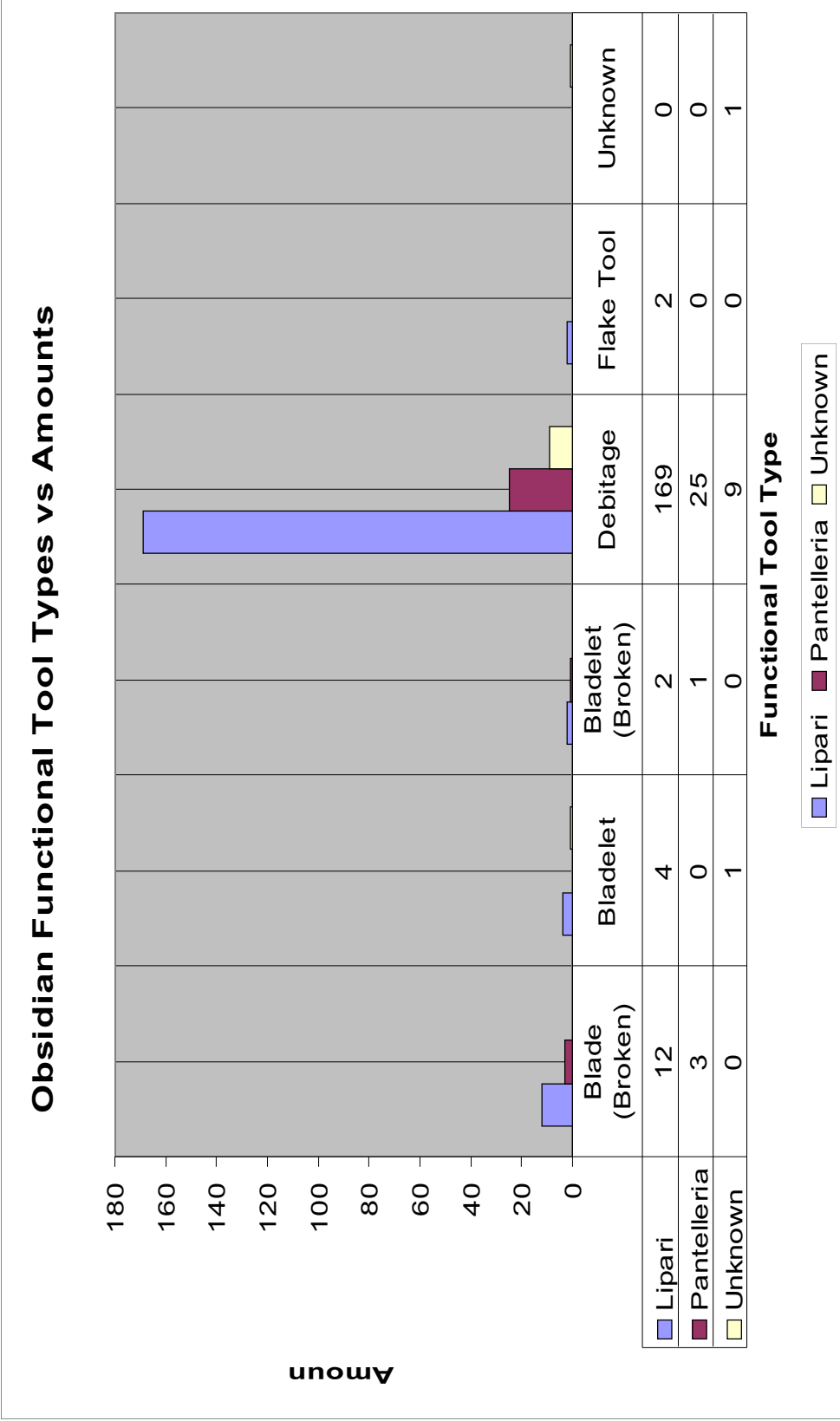
Chart 3:- Chart showing the relative quantities of the obsidian functional tool types.

	Blade (Broken)	Bladelet	Bladelet (Broken)	Debitage	Flake Tool	Core	Unknown
Average Length	1.54	1.9	2.23	1.11	2		0.7
Average Width	1.89	0.98	1.13	0.84	1.55		0.4
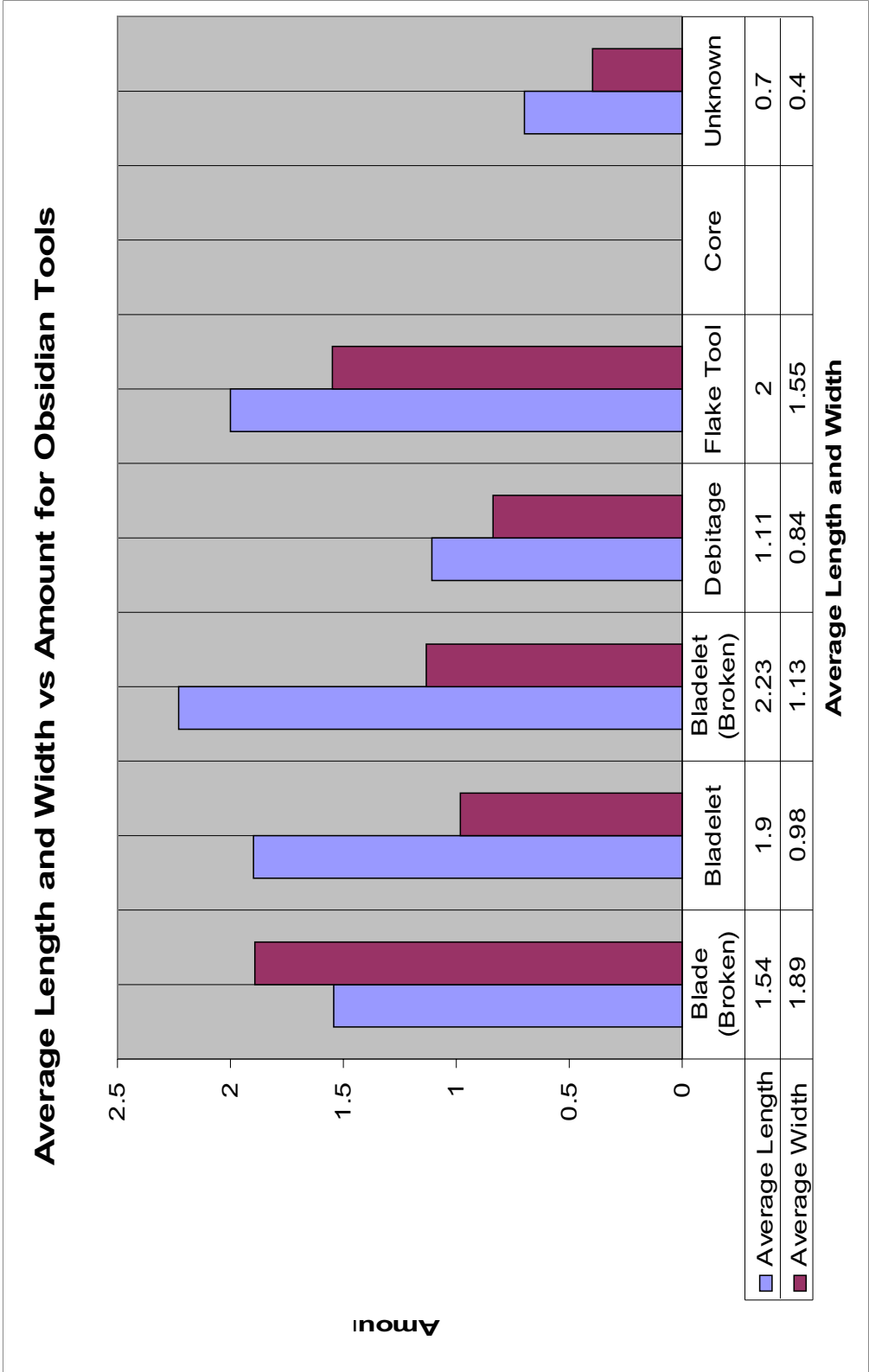
Chart 4:- Chart showing the average length and width against the amounts for obsidian tools.
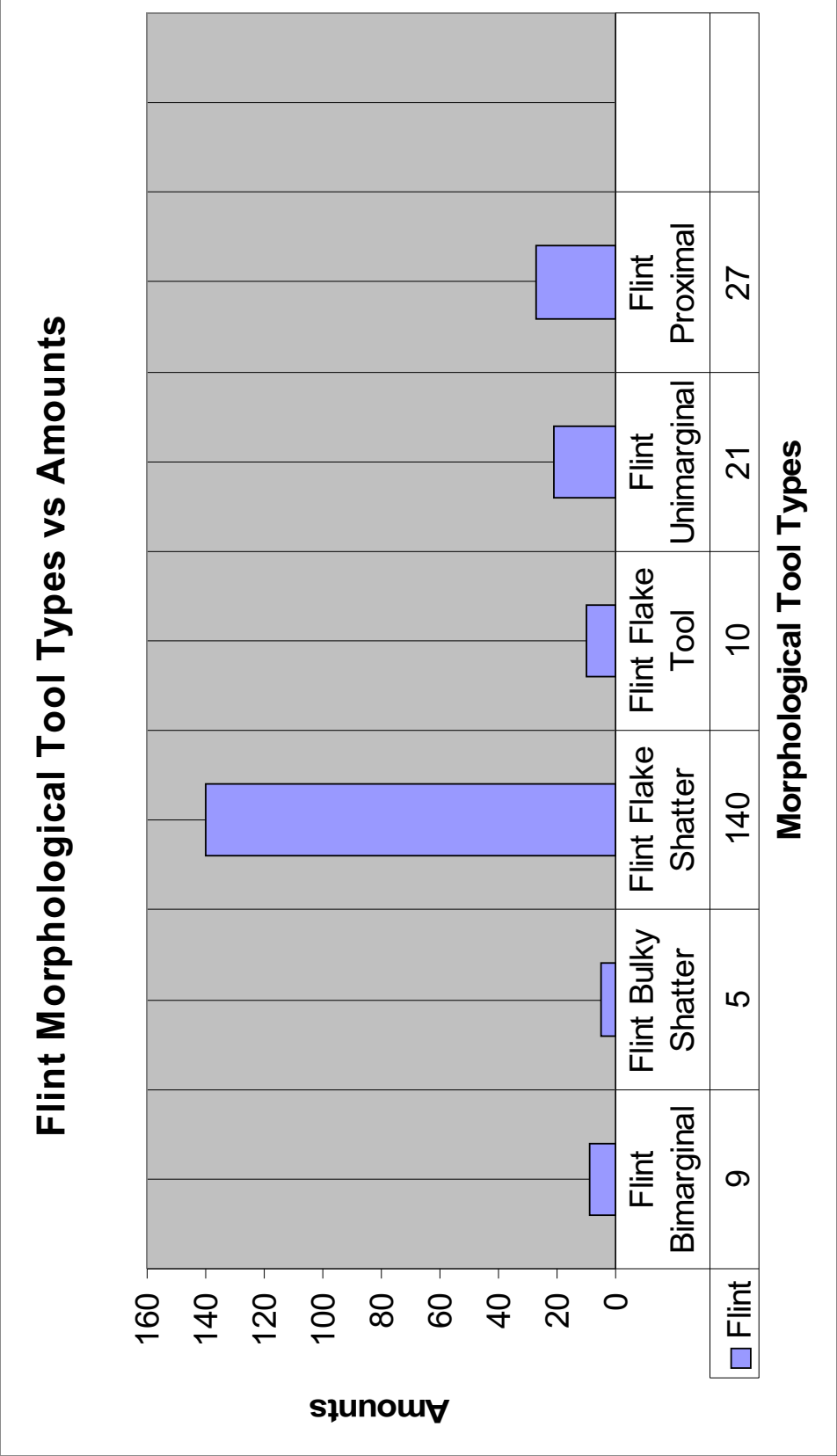
Chart 5:- Chart showing the relative quantities of the flint morphological tool types.
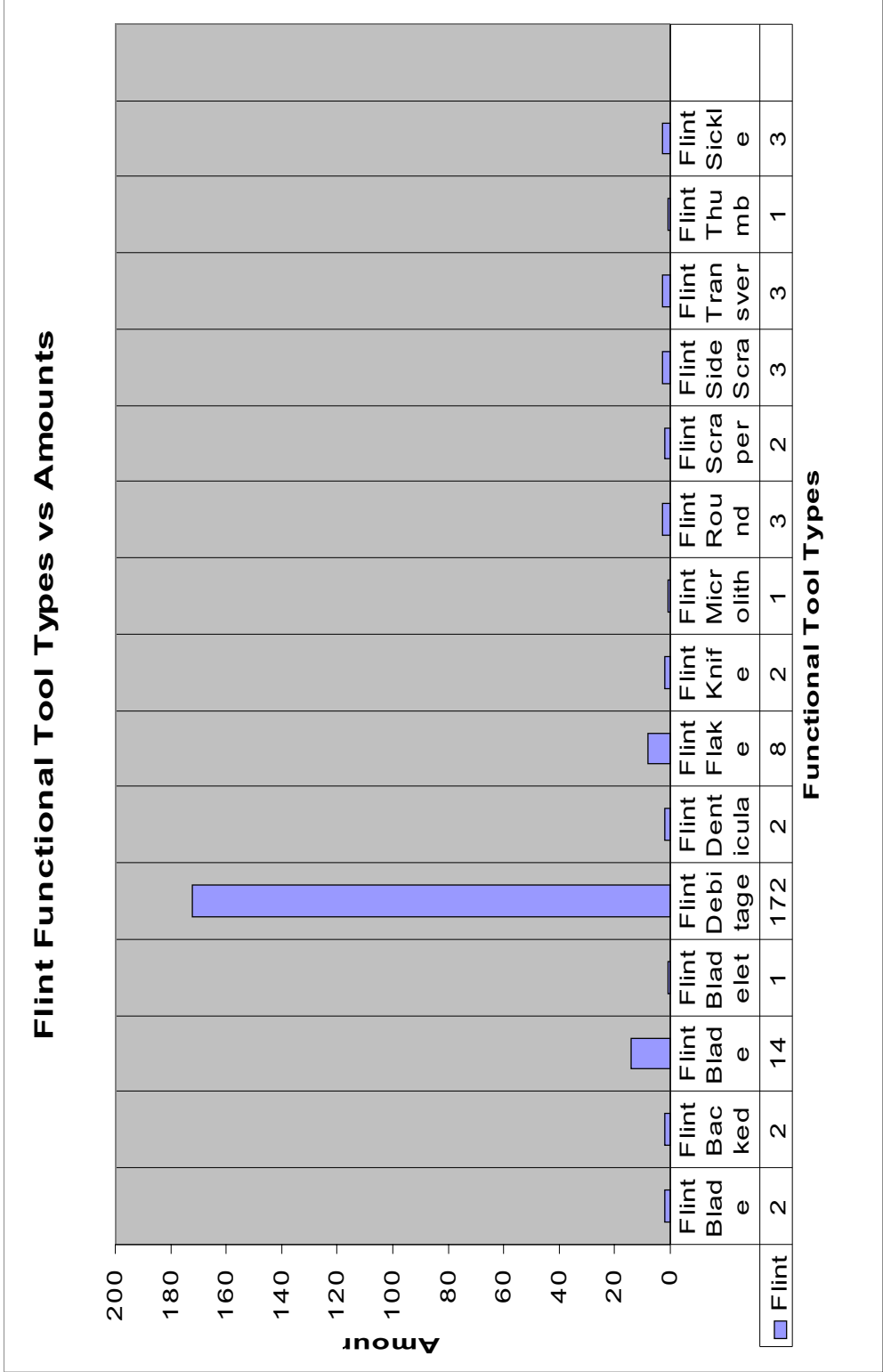
Chart 6:- Chart showing the relative quantities of the flint functional tool types.

	Blade	Backe	Blade	Bladel	Debit	Dentic	Flake	Knife	Microl	Roun	Scrap	Side	Trans	Thum	Sickle
Average Length	5.15	3.95	1.92	2.6	2.33	1.9	3.11	2.95	1.6	3.8	2.85	3.6	3.5	2.2	2.6
Average Width	1.8	1.95	1.34	1	2.12	2.7	1.94	1.95	1.7	2.66	2.15	2.4	2.2	1.1	1.76
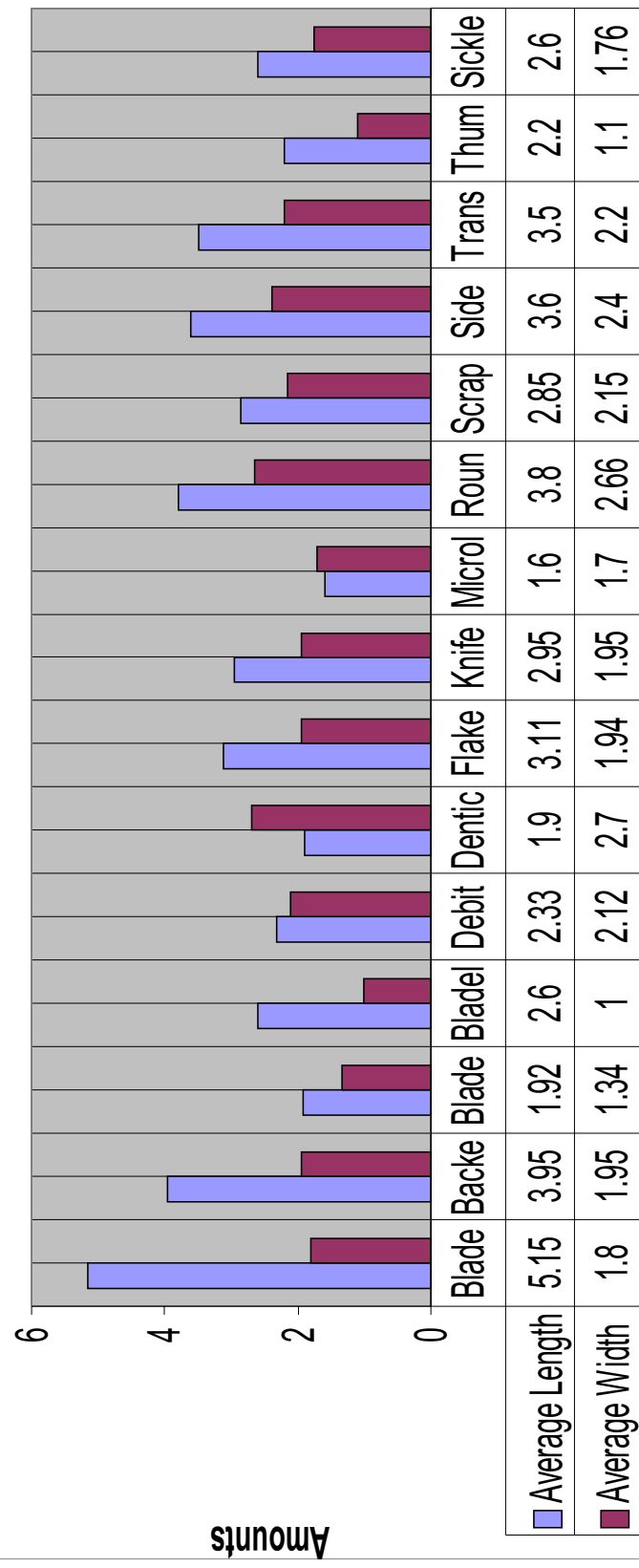
Chart 7:- Chart showing the average length and width against the amounts of flint lithic tools.

Chart 8:- Pie depicting the percentages of primary, secondary and tertiary flake counts.

Figures
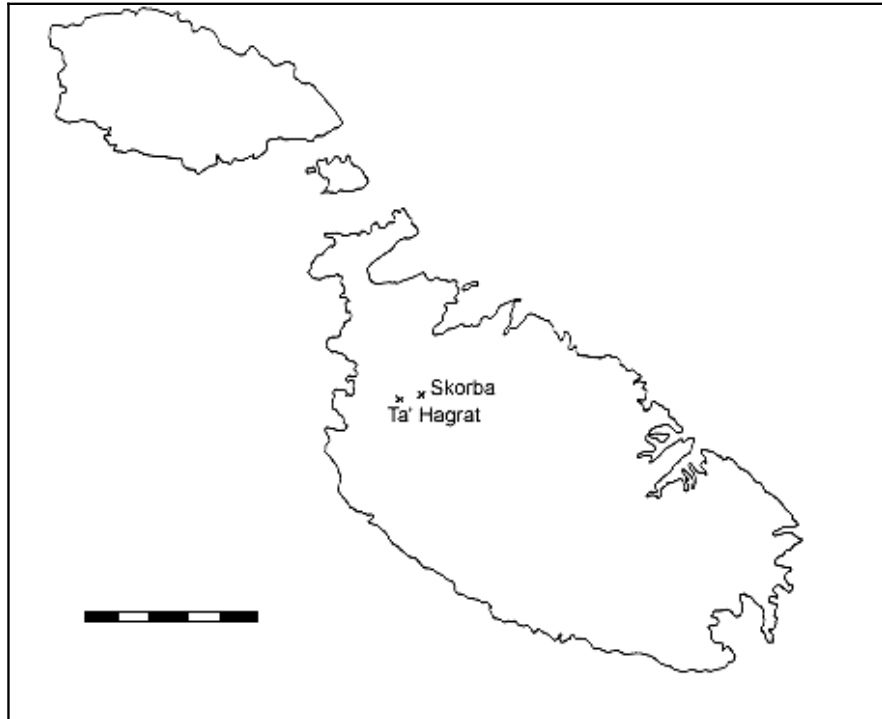
Figure 1:- Map of Malta indicating the site of Skorba and nearby Ta’ Hagrat.
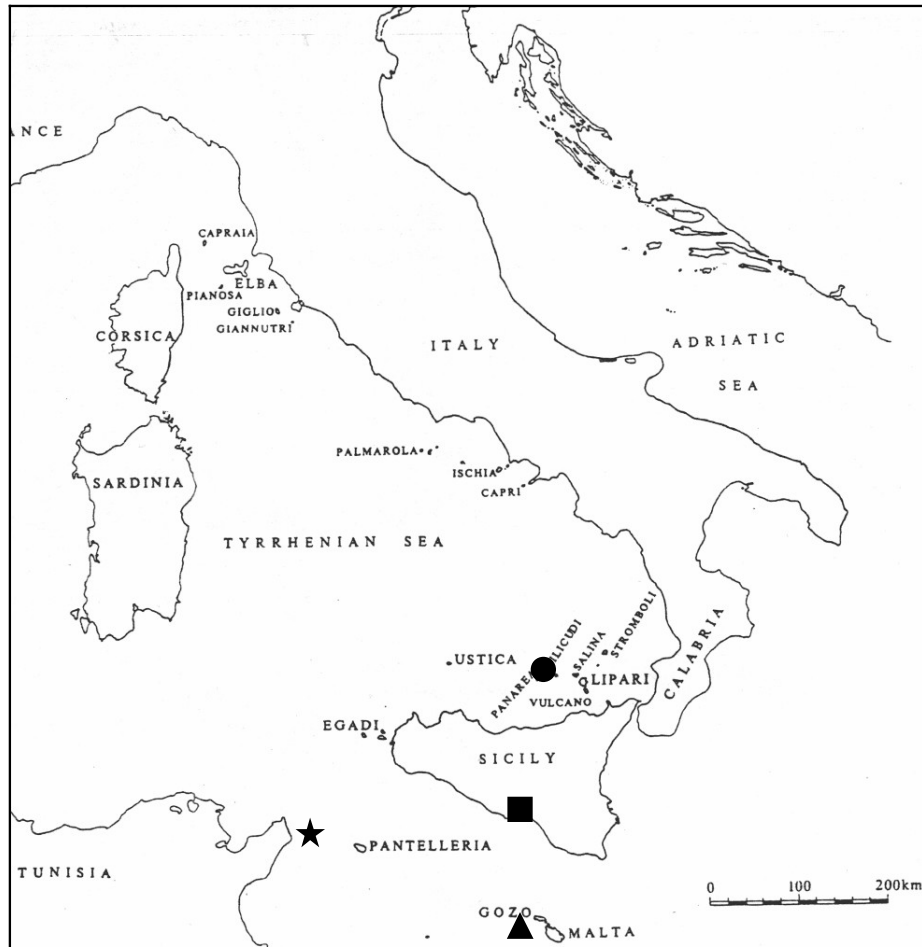
Figure 2: - Distribution map showing the raw materials utilised in Maltese prehistory. The sources are respectively: Lipari obsidian (circle), Pantelleria obsidian (star), Sicilian flint (square) and Maltese chert (triangle) (after Stoddart 1999).
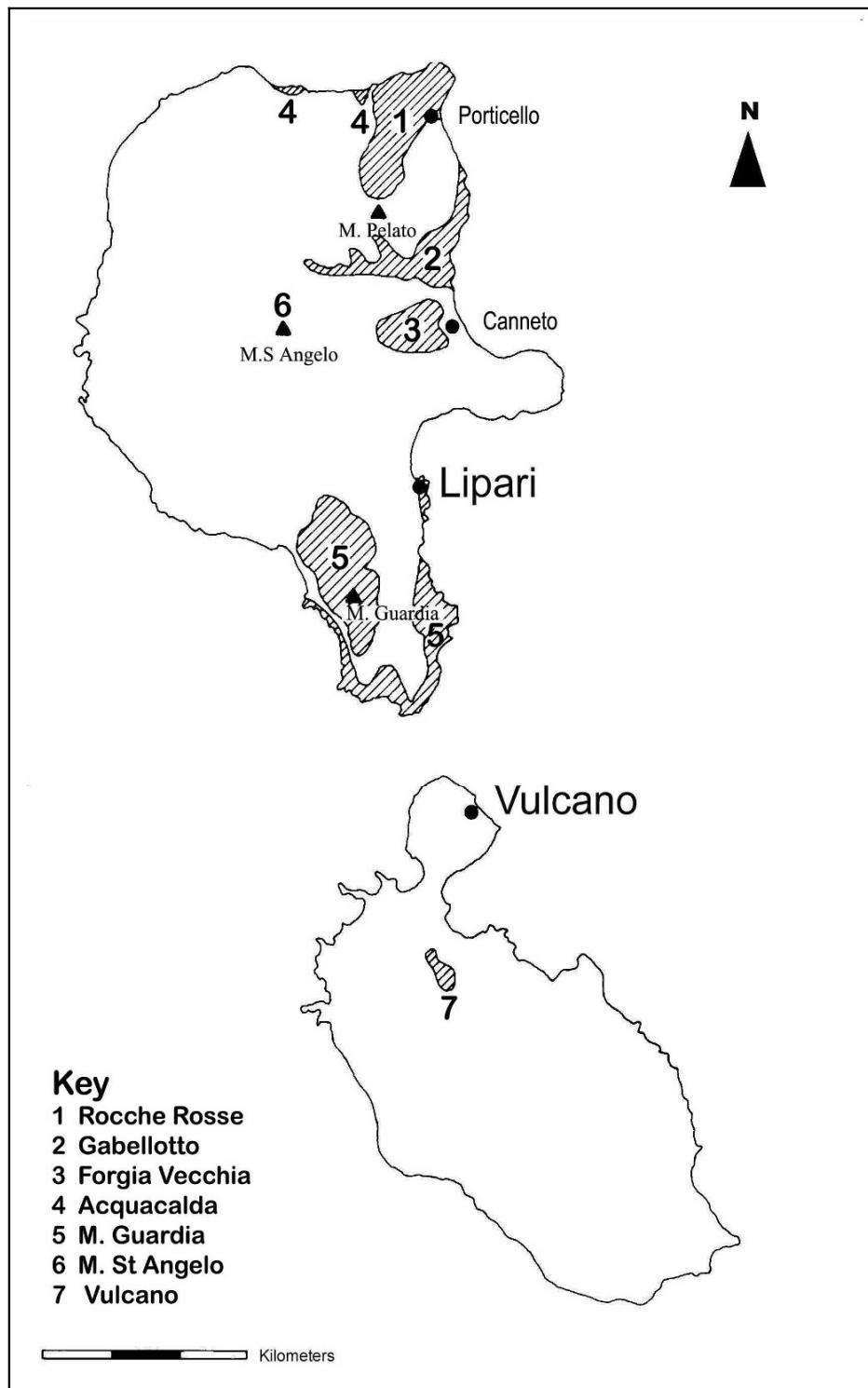
Figure 3: - Map of obsidian sources on Lipari and Vulcano (after Ammerman 1985 and readapted).
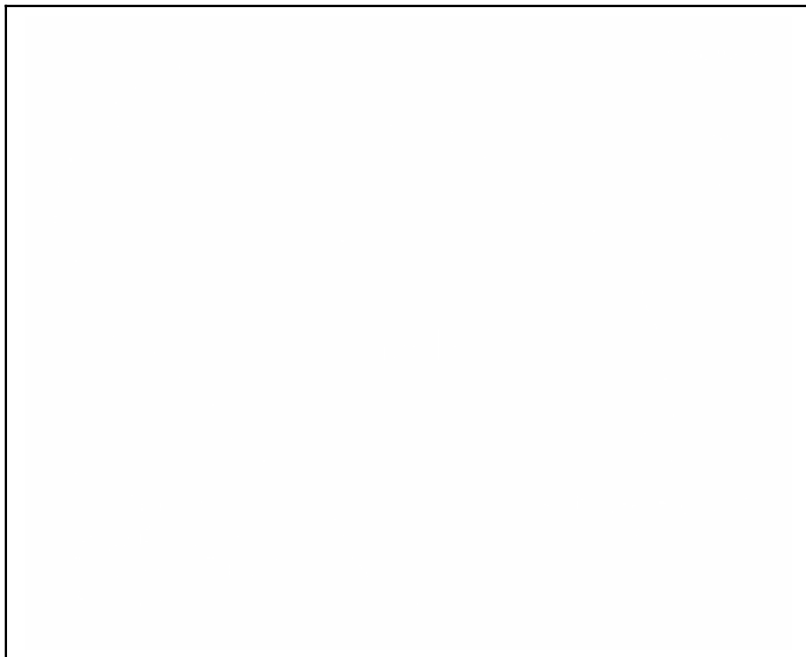
Figure 4: - Map of obsidian sources on Pantelleria (after Nicoletti 1992 and readapted).

<table>
<tr><td>Site</td><td>Stored</td><td colspan="2">Storage Code</td></tr>
<tr><td colspan="2">Lithic number</td><td colspan="2">Excavator/s</td></tr>
<tr><td colspan="3">Description</td><td>Raw material type
1.Material
(Obsidian/flint/chert/other)
2. Colour
3. Grain (brittle/smooth)
4. Transparent/opaque
Tool type
5. Morphological
6. Functional
7.Expedient/formalized manufacture
Dimension
8. Max length
9. Max width
10. Mid point thickness
11. Max thickness
11a. (If present) bulb of percussion thickness
Identified features
12. Ventral side (yes/no)
13. Dorsal side (yes/no)
14. Striking Platform (yes/no)
14a. Striking Platform Type
15. Bulb of percussion (yes/no)
15a. Pronounced or diffuse?
16. Flake scares (yes/no)
16a. Unidirectional or multidirectional
17. Primary/secondary/tertiary flake
Edge features
18. Retouch (yes/no)
18a. Unifacial or bifacial
18b. Location on tool
18c. % of edge with retouch
18d. Primary/secondary
19. Type of retouch (invasive/parallel/irregular/stepped)
20. Termination (plunging/feathered/hinged)</td></tr>
</table>

Figure 5:- Front page of the pro-forma sheet drawn up for recording attributes of lithic tools.

Description/Interpretation of lithic:		
Sketch		
Final drawing required ☐ yes ☐ no		Photograph No. __________
Bibliographic references : ____________________		
Recorded by ____________		Date __________

Figure 6:- Back page of the pro-forma sheet drawn up for recording attributes of lithic tools.
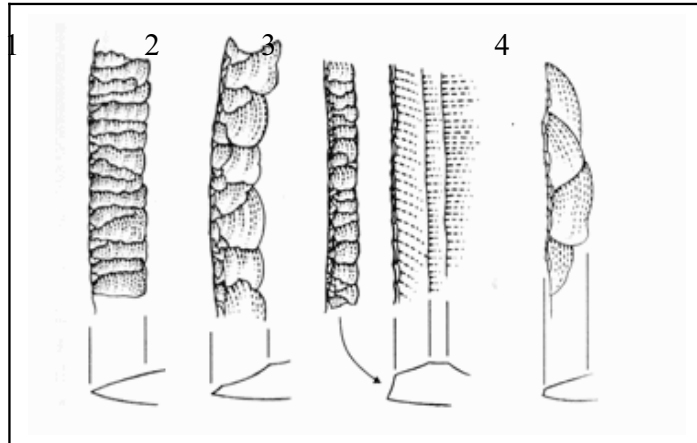
Figure 7:- The schematic diagrams show the four edge retouching types recognised in this dissertation. These types are: invasive parallel (1), invasive retouch (2), steep retouch (3), and irregular retouch (4) (after Martingell 2001).
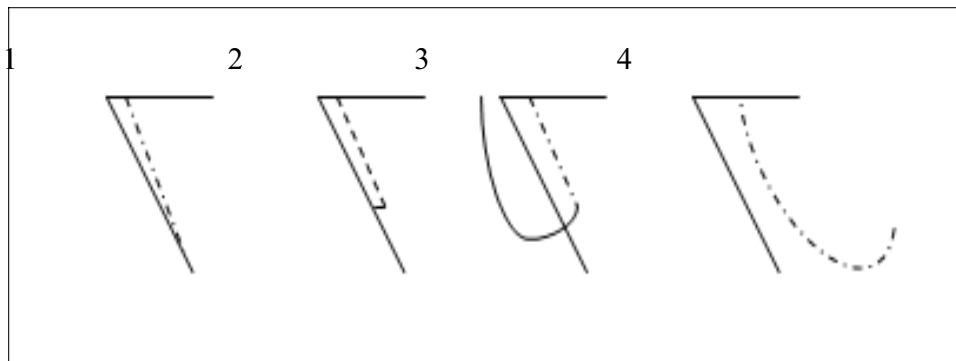
Figure 8:- This schematic diagram shows the four termination types in cross-section. The four types are feathered (1), axial (2), hinged (3) and plunging (4) (after Cotterell and Kamminga 1987).
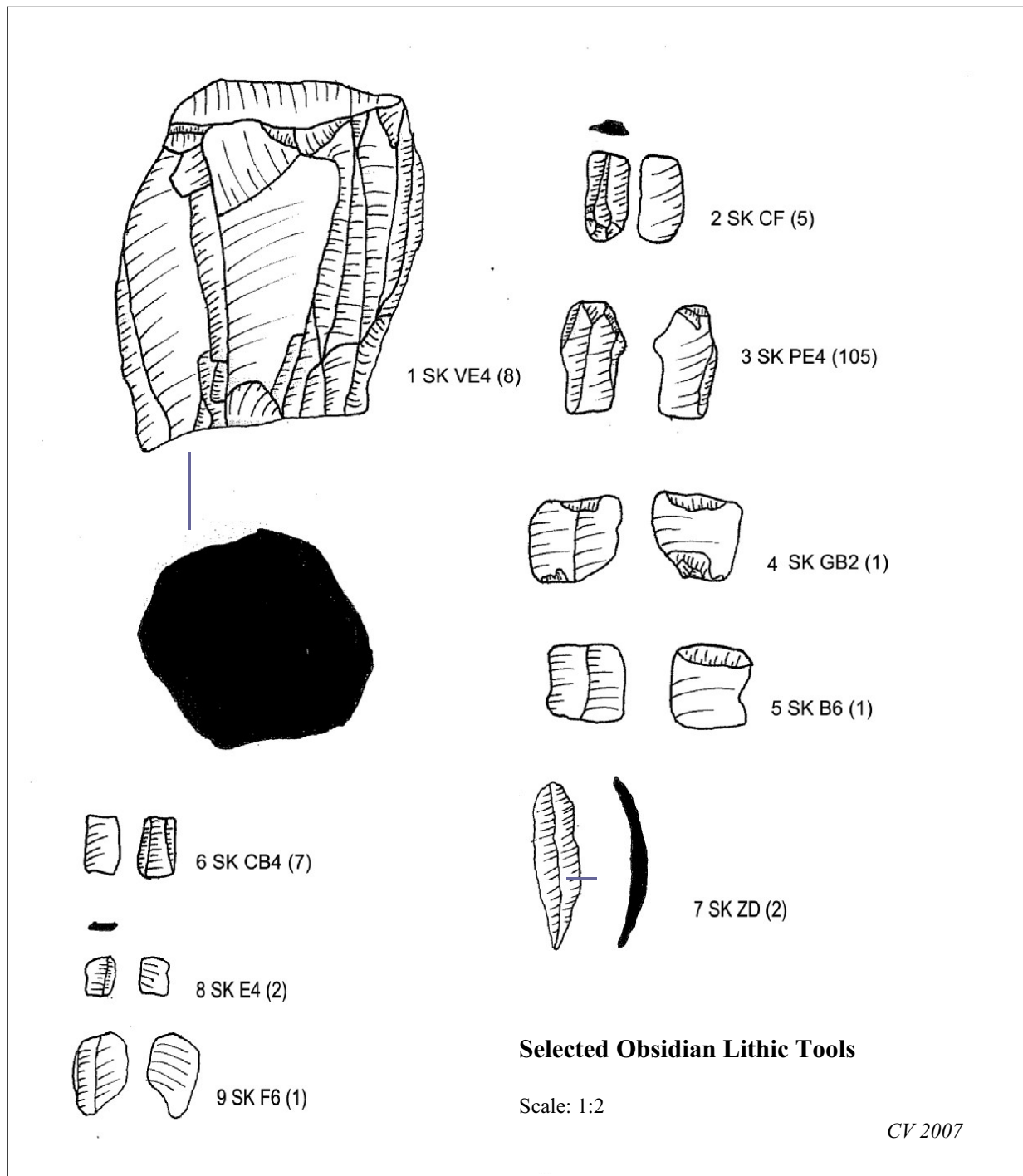
Figure 9: 1) Obsidian Lipari Multidirectional Core, 2) Obsidian Lipari Microblade, 3) Obsidian Lipari Blade, 4) Obsidian Pantelleria Backed Blade (broken), 5) Obsidian Pantelleria Blade (broken), 6) Obsidian Lipari Microblade (broken), 7) Obsidian Lipari Blade, 8) Obsidian Lipari Flake Shatter and 9) Obsidian Pantelleria Flake Shatter.
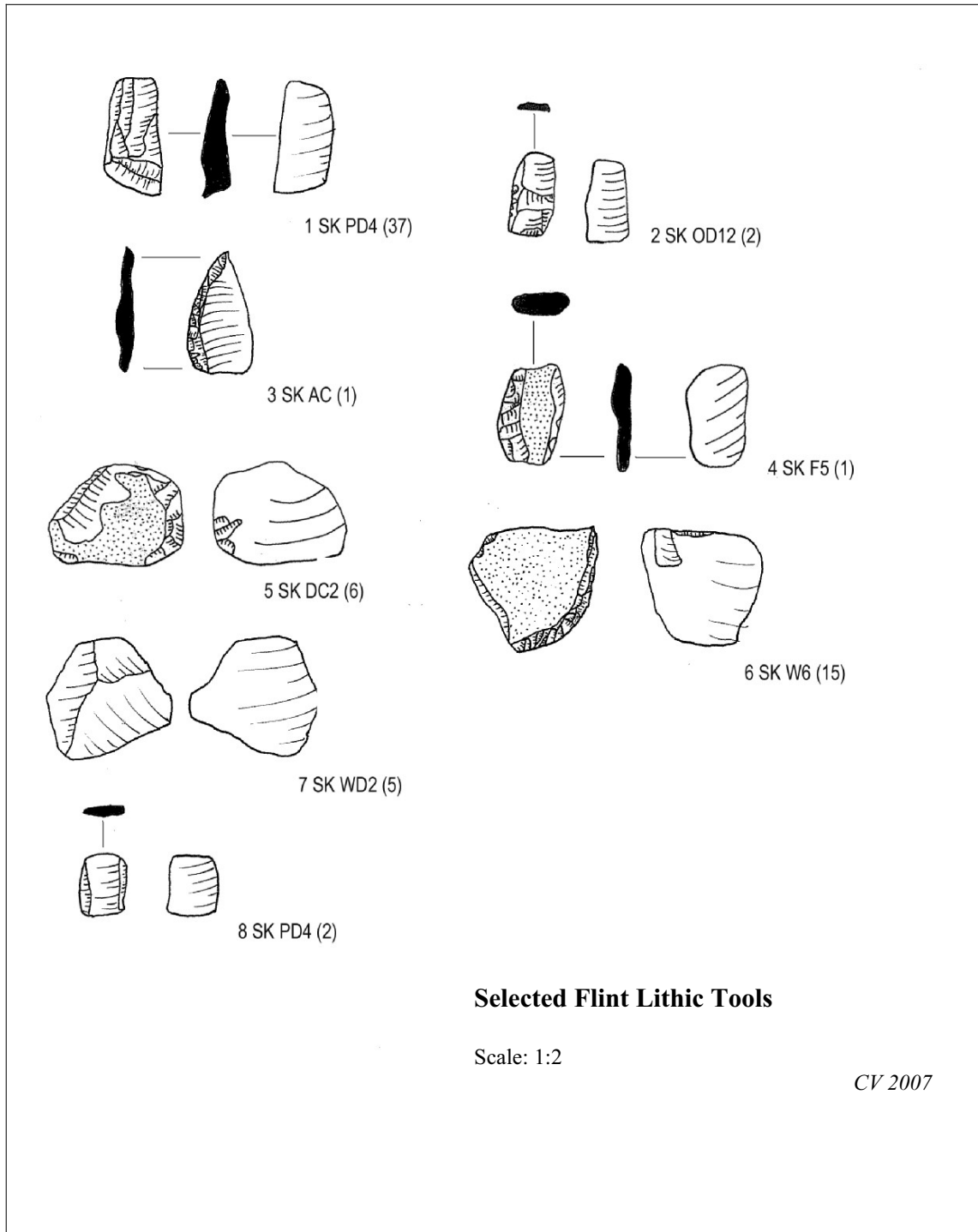
Figure 10: 1) Flint End Scraper, 2) Flint Transverse Scraper, 3) Flint Backed Blade, 4) Flint Side Scraper, 5) Flint All Round Scraper, 6) Flint Transverse Scraper, 7) Flint Flake Tool, 8) Flint Microlith.

Plates

Plate 1: - Obsidian still in situ at Lipari's Forgia Vecchia obsidian source. The white lines running through the obsidian are inclusions of other minerals from the volcanic eruption. (http://www.swisseduc.ch/stromboli/perm/vulcano/icons/obsidian_block.jpg)

Plate 1:- An example of typical obsidian flake shatter recovered from the excavations of Skorba.

Plate 2:- Two typical flint broken blades from prehistoric Skorba.

2

Roman architectural decoration in Malta

David Cardona

University of Malta

Final report
on the study of

Roman Architectural Decoration in Malta

A study carried out in connection with

Work Package 2
'Censimento dei Monumenti di Eta' Preistorica, Romana e Medievale di Influenza Siciliana a Malta',

part of the
INTERREG IIIA K.A.S.A. Project

2nd August 2007

David Cardona
BA (Hons.) arch.

List of Contents

1.0 Introduction & Project Objectives

Late in the year 2006 the undersigned was given the opportunity to carry out a study which would study the fragments of Roman architectural decoration present in Malta and to trace, through the same fragments, any artistic or technical influences that they may have had from the neighbouring Island of Sicily. The connections and the exchange of influences between the two islands have for long been studied, however, these studies have always concentrated (with only very few exceptions) on cultural influences, influences of trade and influences on smaller cultural remains, the foremost of which being pottery shapes and decoration. For some reason or another, the architectural decoration and its artistic influences has escaped the attention and the detailed study of scholars and has normally only be granted a brief mention in Roman studies. Thus, this project provided a unique opportunity to conduct such a long awaited study and the undersigned was given an 8-month contract starting from the 2nd of January as one of the numerous research programs studying the cultural exchanges between Malta and Sicily, which were being conducted in connection with Work Package 2 of the Interreg IIIA K.A.S.A. project.

As stated in the contract, there are two main objectives for the project and according to which the undersigned is to:

- "identify and compile an inventory of the relevant cultural assets through written documentation as well as extant material remains, which assets shall include the architectural decoration of the peristyle of the Roman domus and the fragments of such decoration in the state collections and private collections in Malta."[1]
- "compile and submit a report on the material which shall include the result of the archival research and fieldwork."[2]

The compilation of the above mentioned inventory is essential for the fulfilment of the project. Since the setting up of the archaeological museum and the museum built over the

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[1] Point 3a in contract agreement
[2] Point 3b in contract agreement

Rabat domus in the first years of the 20th century, these fragments have been stored rather than displayed in the two museums, and although they were placed in the same places, they have never been studied as a single branch of study. A catalogue or inventory of the surviving fragments (by studying texts and drawings from the 18th, 19th and 20th centuries one can get an idea of the numerous fragments that have now been lost) has thus never been compiled. It was thus deemed necessary that an essential part of the project should include the cataloguing of the items that were to be studied. This was not only intended to group the items together, but also provided the ground for the detailed study of the artefacts. The database provided a detailed description and photographic record of each and every artefact and this proved to be essential during the comparative process of the Maltese fragments with those in eastern Sicily.

1.1 Methodology & Problems

The project was divided into two main parts and, therefore, there are two different methodologies, and each presented its own problems and obstacles.
All the studied fragments have been catalogued in a database that has been constructed for this project on a program called File Maker Pro 5.5 by the undersigned. The three forms or divisions of the database have already been described in detail in the preliminary report of this project[3], however a brief description of the forms is as follows:

- **General Description** will contain all the general information of the fragment, including the catalogue number, measurements, state of conservation and a very detailed description of the fragment and any decoration present on its surface. (fig. 1)
- **Related Documentation** will give the information of the provenance of the fragment, the date and notes on discovery, a bibliography of any previous documentation on the fragment or the site where it was found and previous pictures and drawings of the fragment. One must bear in mind that the provenance of most

[3] Submitted 15/6/2007

of the fragments has not been recorded by the original finders and this information is subject to availability. (fig. 2)

- **Photos** will hold the photographic record of the fragment that has been taken by the undersigned for this project. One must mention a few photos that have been gently given to the undersigned by Mr. Daniel Cilia. The latter are appropriately marked on the filename. (fig. 3)

All the information given has been taken and inputted by the undersigned and great care was taken to make the information as accurate as possible. Measurements were taken by means of two Vermeer callipers of an opening span of 15cm and 124cm respectively (the latter has been brought over from America for the sole purpose of taking accurate measurements of large items, especially column shafts and their diameters). Great care was also taken to use the right terms for the given fragments and their decorative motifs. A glossary was thus created with terms taken from various architectural encyclopaedias and books related to the subject to support the undersigned in this regard. As already described in the methodology section of the preliminary report, the photographic record was almost entirely taken by the undersigned using as much equipment as possible to present the item as professionally as possible. As many pictures as 150 were sometimes taken for a single and from these were chosen the best photos necessary to present the fragment and its details in its entirety.

The compilation of such a database was no easy feat and a number of problems arose during the works, most of which could not be prevented or controlled by the undersigned. One of the main problems encountered was that of accessibility and logistics. The fragments are scattered in various places and locations and various permits had to be issued by different entities so that these fragments could be duly recorded. Such a problem was encountered for the fragments currently exhibited at the Cathedral Museum in Mdina. Permission was granted for the recording of the few fragments in the museum to the condition that the pictures had to be taken by their own photographer at the undersigned's expense. Although those terms were accepted, getting hold of the persons required to set a date for the fragments to be recorded seems almost impossible and to date, all attempt in contacting the necessary museum staff have been fruitless.

On the other hand, Heritage Malta has almost immediately granted permission to record all the fragments in its possession and on all the sites managed by it.[4] This allowed the undersigned to study the most important and most representative of the fragments in Malta. However a number of factors connected with the way the fragments are currently stored have created no little problems. Most of the important fragments and a large percentage of the national collection of Roman architectural decoration are currently in the reserved collection that is stored at the Maritime Museum in Vittoriosa. These are divided into two stores, one at the second floor that holds less than half of the fragments, and one in the ground floor. Although the upper store presented some problems with space and manageability, it is the ground floor store that presented the biggest problem. This because when the fragment have been transferred from their previous exhibition space at the Rabat domus to these stores, they had been placed on pallets and were placed closely together and some even piled on top of each other (fig. 4). Moreover, these fragments have been surrounded, and sometimes literally covered, over the years by numerous boats, wood and other material associated with the workshop present in the same store (fig. 5). Thus, some of the items could not be studied properly because they were either too heavy or just could not be moved by the undersigned due to other fragments being closely stored next to them. This drastically slowed the working progress because great care had to be taken not to damage the artefacts, while ensuring a proper and detailed documentation. Although work proceeded very slowly, it was decided that since most of the important fragments where stored there, works should proceed to properly document these fragments while other, less important fragments have been left for a future study.

However, together with these fragments were added those fragments that are currently displayed in the interior of the Rabat domus. Being one of the few fragments for which we have a secure provenance, the items of the domus were deemed too important to be left out. Again, the documentation of these artefacts presented some problems in that they are displayed in an open museum (fig. 6). The artefacts could thus not be moved and great attention was taken to use too much equipment which would disrupt the flow of visitors through the display. These problems were however dealt with and these fragments were duly recorded. The fragments currently at the back of the same site presented another

[4] Great thanks here go to Mrs. Suzannah DePasquale and Mrs. Sharon Sultana who promptly sent their positive replies on the issue.

story. Being stored outdoors in a site which has apparently not being taken much care of in the past months has resulted in the fragments being literally covered over in vegetation. An attempt was made to remove the weeds around some of the artefacts but this was found to be too time consuming for the sake of this project and work was thus concentrated on the artefacts in the Maritime Museum.

As already stated in the preliminary report, a one visit to Catania was done by the undersigned between the 9th and 15th of July with the principal aim of studying and gathering as much information on the architectural decoration of Roman building in the area. M of the time was spent in the library of the archaeological institute within the *Universita' Degli Studi di Catania* and during this time, volumes were looked at to gather as much information, especially pictures, dating and all other forms of data which could throw light on any traces of artistic influences between the two. Unfortunately, the library has no accessible digital catalogue so all the research had to be done by going through the extensive card catalogue and selecting the books and articles that could be of any importance. This was of course time consuming and the opening hours of the library, which only on Tuesdays and Thursdays opens in the afternoon, did not help. The undersigned was luckily aided by Dr. F. Trapani who, having studied the architectural fragments herself, has provided the titles of the most important articles and books, although few. The number of books that could be studied became even fewer because some of them could either not be found or were not available in the library. Thus, the undersigned had to make whatever was possible with the limited information available there.
Apart form researching the library, time was also found to visit some sites of importance for this study. The first to be visited were the sites in Syracuse, which is about an hour drive south of Catania. The Regional Museum named after Paolo Orsi was the first to be visited. Numerous fragments were found lying in the gardens of the museum, however, these were all unlabelled and thus neither provenance, nor any dating could be given for them (fig. 7)q. Moreover, the section in the Museum about Syracuse was closed and the Roman section did not provide with any examples of architectural decoration. The Archaeological Park of Syracuse was also visited. Apart from the magnificent remains of the theatre and amphitheatre, only few fragments lay scattered around the entrance to the amphitheatre and again, these were not labelled. Unfortunately, the *Gymnasio* in Syracuse, although very

important because it holds numerous architectural fragments could not be visited due to refurbishing and cleaning works.

Once back in Catania, a visit was paid by the undersigned and Dr. Trapani to the museum at *Castell'Ursino*. Although numerous fragments were found grouped in one corner of the central courtyard, these were again unlabelled and can thus only be used for stylistic similarities but not for dating (fig. 8). The theatre and Odeon at Catania were also visited. Fragments are displayed in a small *antiquarium* attached to the small structures and in the theatre, however only a few pictures of the fragments lying outside could be taken since photographs are not permitted anywhere within the site (fig. 9). Another site that was visited was the cathedral of Catania. The rebuilding of this cathedral has employed numerous columns, bases and capitals from Roman sites, most of which possibly taken from the theatre (fig. 10). However, the height of the columns, lack of good lighting, and worshippers have somewhat prevented the careful studying of these fragments and only a few pictures could have been taken. The latter, having been taken in poor light have turned out to be of very poor quality.

2.0 Progress & Results

2.1 Database

The database contains the information and full catalogue of 93 fragments which, as already explained above, consist of the fragments stored at the Maritime Museum in Vittoriosa and those that are currently displayed at the Roman Domus. However, out of these 93 fragments, pieces have been identified from various sites around the Maltese Islands. These consist of:

- 3 fragments found at the tower of *Ta' Ġawhar*. (f88, f89, f90) (fig. 11)
- 6 fragments that have been certainly found at the Rabat Domus. (f43, f46, f47, f48, f49, f93) (fig. 12)
- 3 fragments from the field known as *Ġnien is-Sultan*. (f24, f25, f42) (fig. 13)
- 17 fragments which were probably found at the Rabat Domus but could not me told with certainty. (f11, f12, f13, f14, f15, f16, f19, f32, f33, f37, f38, f51, f52, f53, f54, f55, f56)

- 2 fragments which were possibly found during dredging works connected with the *Porto Nuovo* in Marsa. (f27, f70)

Unfortunately, the remaining 61 fragments are still without provenance, and will probably remain so unless some new discovery (material or literal) is found.

2.2 The Catania Research – Research Overview

The research in Catania can be divided into two: the research conducted in the library of the Department of Archaeology, and the visiting of sites to view the fragments within them.

As already explained above, some problems have been encountered during the research conducted in the Library in Via San Giuliano. The aim of the undersigned was to go to research this library to acquire as many articles, pictures and other related documentation on the Roman architectural decoration of Sicily. However, the articles that have been found on the subject amount to just three and all of them have been written by the Italian Patrizio Pensabene.

- The first of these articles[5] relates on the architectural decoration of the Roman villa at Piazza Armerina. This article lists the varieties of architectural decorations found in the villa, with special insistence on the capitals. The text is accompanied by 34 photographs, only 3 of which show fragments that are not capitals. The undersigned has through the official, thick book that serves as a report for the excavations of the same villa for further information on the fragments, however, very rarely do architectural fragments come at stake and no good illustrations are given.
- The second article is divided into three sections which deal on the architectural decoration, the use of marble and the importation of oriental artefacts in Rome, Italy and North Africa between the second and sixth centuries AD.[6] This article is considered as one of the most important for the study of architectural fragments in the central Mediterranean as it gives descriptions, lists and figures of artefacts. It also gives a detailed account of the

[5] Ampolo, C., Carandini, A., Pucci, G., Pensabene, P., 1971: La Villa di Piazza Armerina, Appendice II; gli elementi decorative architettonici, in *Melanges De L'ecole Franciase de Rome Antique, vol.83, 1*, pp 207-233

[6] Pensabene, Patrizio, 1986; La Decorazione Architettonica, l'Impiego del Marmo e l'Importazione di manufatti orientali a Roma, in Italia e in Africa (II-IV DC), in Giardina, Andrea (ed.), *Societa' Romana e Impero Tardoantico, vol. III; le merci, gli insediamenti*, Editori Laterza, pp285- 429

architectural developments that occurred in the 4 centuries that this articles deals with. However, this article deals primarily with architectural fragments that were imported or had direct influence from the eastern provinces. Thus, it rules out the indigenous styles of southern Italy and only gives account of the fragments of eastern origins. Another problem with this article is the fact that it only deals with capitals (both Corinthian and Composite) and marble sarcophagi. No mention is thus made of any decorated architectural elements. Lastly, the article only deals with the period between the 2nd and 6th centuries AD and therefore does not take into account the preceding centuries. However, the article was still deemed of great importance since it can help to trace any oriental origins that any capitals in Maltese connections could have.

- The last article is directly connected with the city of Catania in as it deals with the architectural decoration of the Roman Theatre of Catania[7]. Not having been able to take photographs of the architectural members on display in the theatre itself, this is one of the only sources that provide photographs of the said items, thus allowing direct comparisons to be made with Maltese fragments. This article studies the architectural fragments that were studied by Pensabene during his collaboration on restoration works conducted in the said site between 1970 and 1971. The study concentrates mostly on the architectural elements of the *scenae* and gives both a detailed description of the general decorative scheme as well as a short catalogue of the surviving fragments.

Among the various other articles and books are some which although not directly related to the subject or architectural decoration in Sicily, provide, mainly through their pictures and plates, valuable information about fragment found in Sicily. Among these is the book by RJA Wilson on Sicily during the Roman Empire.[8] This book provides a general insight on the various aspects of the Sicilian province during the Roman Empire, including a section on architecture. The latter is, however too general and provides very little information suitable for this project. On the other hand, the photographs of various fragments and sites presented in this book have proved to be quite useful.

[7] Pensabene, Patrizio, 2005: La Decorazione Architettonica del Teatro di Catania, in Gigli, Rossella, *ΜΕΓΑΛΑΙ ΝΗΣΟΙ: studi dedicate a Giovanni Rizza per il suo ottantesimo compleanno, vol.2*, Consiglio Nazionale delle Ricerche, I.B.A.M., Catania

[8] Wilson, RJA, *Sicily Under the Roman Empire: the archaeology of a Roman province.*

Also of some importance were specialised books on the various variations of Corinthian capitals in different areas of the Roman Empire. Unfortunately, all these books are written in German, a language that the undersigned does not understand. However, all these studies presented an extensive photographic record, from two of which could be sampled fragments from Sicily.[9] The book by Lauter Bufe is especially important in the fact that it also represents a capital now on display in the Rabat Domus (f45) (figs. 37 & 38).[10]

Other books and articles have been skimmed through in hope that they could have given some more information but all proved quite fruitless. The list of this literature is as follows:

- Becatti, Giovanni
  1962 *L'Arte Romana,* Garzanti, Italy
- ______________,
  L'Arte dell'Eta' Classica, Sansoni Editore

- Bianchi Bandinelli, Ranuccio
  1984 *L'Arte Romana*, Editori Riuniti, Roma

- Bucchi, Letizia
  1972 *Il Santuario di Apollo Temenite Press oil Teatro Antico di Siracusa*, unpublished dissertation

- Freyberger, Klaus S.
  1990 *Stadtromische Kapitelle aus der Zeit von Domitian bis Alexander Severus,* Verlag Phillip von Zabern, Germany

- Orsi, Paolo
  1929 scoperte Archeologiche in Sicilia, extracted from *Notizie Degli Scavi fascicoli 1,2 & 3*, Dott. Giovanni Bardi, Roma

- Pallottino, Massimo
  1940 *Civilta' Romana: arte figurative e ornamentale*, Casa Editrice Carlo Colombo, Italy

- Schörner, Günther
  1995 *Römische Rankenfreise,* Verlag Phillip von Zabern, Germany

- Tenney, Frank

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[9] Lauter-Bufe, Heide, 1987: *Die Geschichte Des Sikeliotisch-Korinthischen Kapitells*, Philipp von Zabern, Germany and Kahler, H. 1939: *Die Romischen Kapitelle Des Rheingebietes*, verlag von Walter de Gruyter & Co., Berlin
[10] Lauter Bufe 1987: p24, n.34, taf. 17

1924 *Roman Buildings of the republic; an attempt to date them from their materials*, Papers and Monographs of the American Academy in Rome vol. III, American Academy in Rome

- Wilson, RJA
  1996 La Topografia della Catania Romana. Problemi e prospettive, in Gentili, Bruno (ed.), *Catania Antica: atti del convegno della S.I.S.A.C. (Catania 23-24 Maggio 1992),* Istituto Editoriale e Poligrafici Internazionali, Pisa and Rome

As already stated above, sites and Museums were also visited in order to get as much information as possible of the sites and the fragments or architectural decoration found or stored within them. The sites that were visited have already been listed above so they will not be repeated. What can be said in this section is that although numerous pictures were taken from the Cathedral of Catania, Castell' Ursino and the Paolo Orsi Museum, the visits were still somewhat disappointing in the fact that most of the fragments are lying around in the gardens and courtyards of the said sites with no labelling, provenance or dating available (figs. 7 & 8).

3.0 Evidence of Sicilian or South Italic influence on Maltese Architectural Fragments

3.1 General Considerations

The undersigned has undergone this study with the main aim of tracing any influences that the architectural styles and decorations of Roman Sicily could have had on similar fragments in the Malta. However, one must keep in mind the fact that the two islands still remain distinct from each other and a development that occurs in one of the islands does not necessarily occur in the other.

In fact, one can see clear differences and developments in the use of materials and orders between the two islands. According to Dr. Francesca Trapani who, as already said above, made a similar study for Eastern and Southern Sicily for her *specializzazione*, has found out that with the integration of Sicily under Roman rule all architectural decoration was done almost solely in marble and precious stones. The marbles range from the cheap Proconnesian marble (used in the upper orders of the *scenae* in the theatre of Catania due to lack of monetary resources during the time of construction), to coloured *Breccia*, and

various shades of granite (figs. 14 & 15). The fragments in local limestone and volcanic rock can in fact be counted on a few fingers. There are in fact only one capital and base carved out of volcanic rock in the *Museo Civico* (Castell' Ursino) of Catania and both are of very poor quality (fig. 16). On the other hand, one Early Corinthian capital from Noto and now in the Paolo Orsi Museum is made of local Limestone (figs. 39 & 40). It also seems that once Sicily became to form part of Rome, the Doric order disappears almost immediately to be replaced by Corinthian, and in few cases by Composite.

This pattern does not reflect what was going on in the Maltese Islands. The evidence gathered from the Rabat Domus clearly shows that the elite of the Maltese islands did not easily stop using Globigerina Limestone for marble. Various fragments of architectural decoration in Globigerina Limestone have in fact survived to allow us to say that the unique properties of the Maltese Globigerina Limestone were fully exploited during the first couple of centuries of the Roman domination on Malta. The peristyle of the Rabat Domus and it's Doric decoration, dated to the second half of the 2nd century BC, is the foremost example for the use of Globigerina Limestone (fig. 12). However one must not forget to mention the fragments of modillion cornice found at Ġnien is-Sultan by T. Żammit in 1909[11] (f24, f25 and f42) (figs. 13, 17 & 18), which are lavishly and crisply decorated in the same local Limestone, and which stylistic considerations and comparisons with a similar fragment form the theatre of Cherchel in Algeria (fig. 19) might place these fragments in the transitional period from Republic to Empire. One must also mention the elegantly carved fragment of a coffered ceiling found at Ta' Ġawhar[12] (f88, f89, f90) (figs. 11 & 20). If the dating given for this fragment in the Museum Annual Report proves to be correct, it could push the use of local stone (although possibly sporadic) all the way up to the 1st or 2nd century AD. It thus seems that although Marble started to be imported for architectural projects in the Maltese islands (only Proconnesian marble is attested for) with the beginning of the Empire, local stone was still used at times. Also to consider is the fact that, unlike the almost immediate disappearance of the Doric order in Sicily with the beginning of Roman rule, this Hellenistic order was used in the Maltese islands at least up to the start of the Empire.

[11] MAR 1909-1910: E7
[12] MAR 1960

Another consideration which must be taken in place is the fact that certain features both in the decorative schemes and in the fragments in general do not always tally in date with those of another place. Regarding Malta and Siciliy this is the case of a feature in the Corinthian capitals, this being the circular projection that makes up the top bedding surface onto which the architrave would thus rest. It appears that this feature is relatively early in date and disappears totally by the 1st and 2nd centuries AD.[13] (fig. 23) However, when one considers the Corinthian capitals in the Maltese islands, they seem to always have the circular projection even though their decorative schemes (although not Sicilian in style) were dated by Dr. F. Trapani to not before the 2nd century AD and later (figs. 21 & 22). Thus one has to be careful about the fact that dates obtained from comparisons, although being the only clear way of determining the dates of most fragments obtained from unscientific excavations, will only give a base date and that regional differentiation might, and most probably will, occur.

3.2 Stylistic Similarities and Differences

Much disappointingly, the research in Catania and Syracuse did not provide any fragments that could hint to any stylistic similarities with Maltese fragments. However, following is a list of the stylistic similarities that could be traced between Malta and these two areas of Sicily. These will be divided into the different members of the classical orders.

3.2.1 Bases

The bases seen in both Malta and Sicily do not provide any great variety. The attic base, with an upper and lower *torus* divided by the concave *scotia* has been the preferred base for the said orders for almost all the time of their use. It varies very little in shape and although it could at times be lavishly decorated, it was most widely used in its plain variety. Since it has been used widely across all the Classical World it is no surprise that numerous examples of attic bases could be found in both the two Sicilian cities (figs. 7, 24 & 25) and Malta (figs. 26 & 27). As one can see, the shape, concavity and convexity of the different mouldings is very similar, as is the deep, sharp cut that clearly distinguishes the fillet above the *scotia* and just below the upper *torus*. However, this cannot be placed as one of the

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[13] Information given by Dr. F. Trapani

features influenced by Sicily as it was widely used in the provinces of Rome. The Maltese examples of bases recorded so far amount to 6 in number (f8, f9, f18, f65, f69 & f87) and, with a couple of exceptions, are all almost identical in shape and size. In Sicily, Attic bases could be seen both in Catania, especially in the Cathedral[14] (fig. 28) and in the Garden of the Museo Regionale Paolo Orsi of Syracuse.

3.2.2 Columns

The influence of column types is very difficult to determine since they are very similar to one another. What could be noticed is the fact that there seem to be no Doric columns dated to the period of Roman occupation in Syracuse and Catania. Neither are there any columns of local stone other than marble and breccia. There was only one exception to the latter and this refers to a small shaft of an octagonal column of Limestone now placed in the garden of the Museo Regionale Paolo Orsi (fig. 29), which is surprisingly similar to the octagonal column in the Maltese collection (f50) (figs. 30 & 31). Some reeded columns could also be seen in Catania's Castell' Ursino (fig. 32 & 33). However it is not clear whether the reeding continued along the entire length of the column or whether it stopped around 1/3 up the length as seem to be the case with the 3 fragments in the Maltese collection (f40, f75, and f76). Two of these columns also differ from their Sicilian counterparts in the fact that items f75 and f76 are respectively carved out of Globigerina and Coralline Limestone. (figs. 34, 35 & 36)
Another difference between Malta and the two Sicilian cities are the so-called cigar columns (columns with a pronounced *entasis* in the centre) of which numerous examples are known in Catania but seem to be totally missing in the Maltese context.

3.2.3 Capitals

It is among the fragments of this type of architectural member that two clear examples of influences from this area can be traced. These consist of two Corinthian capitals, the artistic influence of which is traced to a type of Sicilian capital dated to around the 2nd century BC.
The first of these fragments (f45) is in Globigerina and once topped a corner engaged column. It has two crowns of delicately carved 'lettuce-like' (as this type of foliage is known

[14] Attic bases almost identical to the ones in Maltese collections are mainly seen below the reused columns. Other attic bases can be seen still in situ below the arches dividing the naves of the church. These are much larger in size and are the bases of the original Byzantine Cathedral.

among Italian scholars) acanthus leaves. It is heavily damaged but the stems of two round-sectioned helixes that must have turned sharply towards the centre can still be seen (figs. 37 & 38). It is these lettuce-like leaves and pronounce, straight, round-sectioned helixes that make it characteristically close to the Sicilian type of Corinthian Capital that some examples of which, according to RJA Wilson, could be pushed back to a 3rd century BC date[15] (figs. 39 & 40). The Maltese capital can thus be placed among the earliest manifestations of the Corinthian order in the Malta and, depending on whether a 3rd or 2nd century date is given, could also be cotemporary to the early period of the Rabat Domus. One must also note that this fragment has been included in the study of Lauter Bufe on the Italic (or Sicilian) Corinthian capital).[16]

The second capital is somewhat problematic in that it is carved out of white marble (probably Proconnesian) and thus probably produced in Imperial times rather than during the Republic (f85)(fig. 41). It clearly imitates the Sicilian type of capital and although the foliage is highly damaged, the round-sectioned helixes converging slightly towards the centre are still very recognizable. Although it is plausible that this was a later imitation of an earlier capital, the hypothesis that this fragment could have been imported from Sicily or any other part of Southern Italy at an earlier stage cannot be entirely ruled out since both places made use of marble at much earlier dates than Malta.

Examples of this type of capital are very rare nowadays. The most important of such capitals is the one from Noto and now in the Museo Regionale Paolo Orsi of Syracuse[17] (figs. 39 & 40). The similar features carved in the Limestone out of which this fragment is made and the Maltese examples can be clearly. Another famous capital is the one found in Tindari, a site on the north coast of Sicily.[18] However this fragment is made of terracotta and lacks the characteristic helixes. (fig. 42)

Unfortunately, no other considerable artistic influences could be traced between the remaining Maltese Corinthian capitals and those in Catania and Syracuse. It seems that these followed Asiatic or North African artistic influences.

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[15] Wilson: 18, fig. 13a

[16] Lauter Bufe 1987: p24, n.34, taf. 17

[17] Wilson: 18, fig. 13a & Lauter Bufe1987: taf 16, n. 32

[18] Wilson: 18, fig. 13b & Lauter Bufe1987: taf 9 & 10, n. 27

3.2.4 Entablatures

Unfortunately, very few fragments from the different members of the entablature could be studied in Sicily, and even fewer are given representation in books and articles. It was thus very difficult to conduct the necessary stylistic comparisons and no similarities have been identified within the few fragments seen.

4.0 Conclusion

As seen above, the results of this study have been relatively disappointing in the fact that very few stylistic similarities could be traced between the fragments studied in Malta and the ones that could be studied in Catania and Syracuse. The two islands being so close to each other, and artistic influence being very pronounced in earlier and even later periods, one would have thought that Sicily could have had a major influence on the styles of architectural decoration in Malta. Even more so since Malta was part of the Sicilian Province and was politically under its direct supervision. However, the fact that so little could be traced from the studied fragments will mean that architectural decoration of roman Malta owes its styles to some part of the Roman World that still has to be clearly identified. Studies seem to be pointing towards Asia Minor and North Africa but these will have to be confirmed with further studies outside this project.

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Figures

FORM | LIST | GLOSSARY

NEW | DELETE

GENERAL DESCRIPTION | RELATED DOCUMENTATION | PHOTOS

FORM NO. 2

ITEM NO. 2

GIVEN NAME: architrave / frieze

ORDER: Corinthian / Composite

DIMENSIONS

HEIGHT: 66.7 CM.

	TOP	BOTTOM	
WIDTH/DIAMETER	142		CM.
THICKNESS	55.4	39	CM.

ARTISTIC INFLUENCE:

COUNTRY OF ORIGIN: Unknown

MATERIAL: Proconnesian marble

MATERIAL PROVENANCE: Proconnesus

TOOL MARKS: yes

PROBABLE PERIOD: Imperial - Post Hadrianic

APP. DATE: 117 onwards A.D.

TOOL MARKS DESCRIPTION

There are various different tool marks on the surfaces. The bottom surface was worked relatively flat, with only a few scratches left on the surfaces. The top and both sides, on the other hand have anathyrosis bands. The bands of

STATE OF CONSERVATION

Complete fragment with only a few chippings, especially in the bottom fascia and rounding of edges.

DESCRIPTION

Large block of marble conserving all original surfaces (the back cannot be studied at this stage because the block is currently being stored resting on its back). The heavily decorated front represents the frieze and architrave of a Corinthian or Composite building. The decorative ensemble starting from the top of the fragment is as follows:

FRIEZE

- A plain fascia of a height of 5cm running along the top edge of the block. This must have

ARCHITECTURAL DECORATION

Fig. 1
The General Description sheet on the database

Fig. 2
The Related Documentation sheet on the database

Fig. 3
The Photos sheet on the database

Fig. 4
Three capitals closely packed together in the store of the Maritime Museum

Fig. 5
One of the fragments at the Maritime Museum covered with wood and other objects

Fig. 6
Part of the display at the Rabat Domus

Fig. 7
Fragments lying around in the garden of the Museo Regionale Paolo Orsi in Syracuse

Fig. 8
Stacked architectural fragments in the yard of the Museo Civico of Castell' Ursino in Catania

Fig. 9
The Theatre of Catania

Fig. 10
Two reused bases, columns and Corinthian capitals flanking one of the chapels in the Catania Cathedral
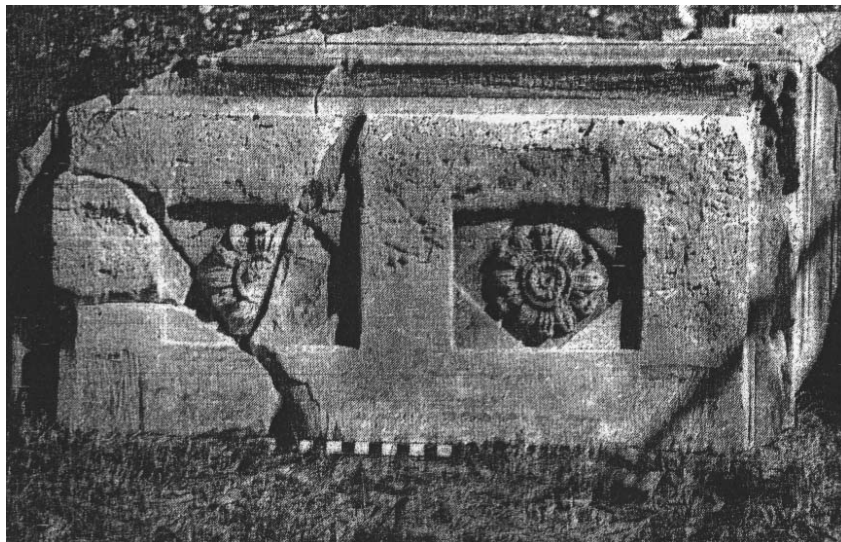
Fig. 11
The fragment from Ta' Ġawhar soon after discovery
(MAR 1960)

Fig. 12
The peristyle of the Rabat Domus with its reconstructed Doric order
(Photo courtesy of Mr. Daniel Cilia)

Fig. 13
One of the fragments discovered at Ġnien is-Sultan, Rabat

Fig. 14
A repaired column of *breccia* at the theatre of Catania

Fig. 15
A column of granite at the theatre of Catania

Fig. 16
The base and capital of volcanic rock at Castell' Ursino

Fig. 17
Detail of the decoration of one of the fragments from Ġnien is-Sultan

Fig. 18
Detail of another fragment from Ġnien is-Sultan
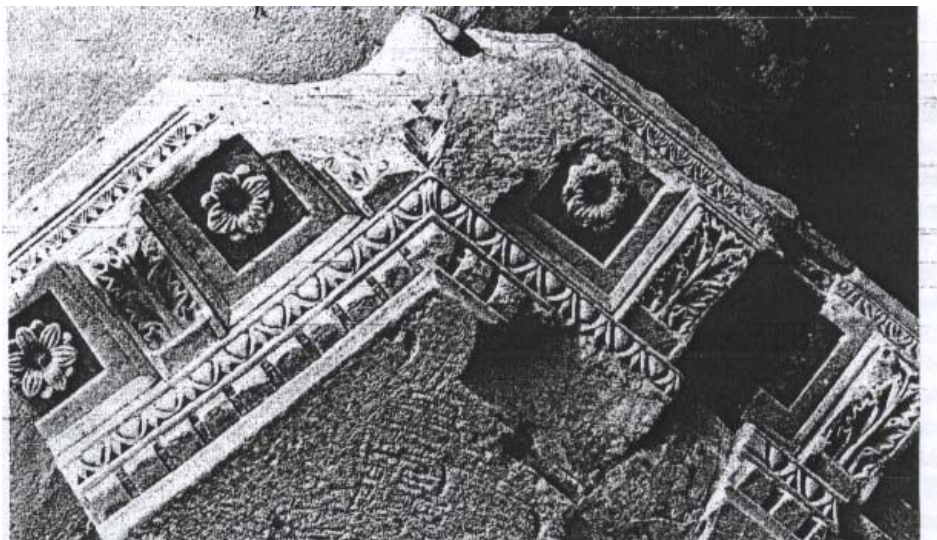
Fig. 19
A fragment from the theatre of Cherchel, Algeria, very similar to those of Ġnien is-Sultan
(Gros 2001: 493 fig. 604)

Fig. 20
Detail of the decoration of the fragment from Ta' Ġawhar

Fig. 21
Circular projection on the top bed of fragment f45

Fig. 22
Circular projection on the top bed of item f72

Fig. 23
Top bed of a Corinthian capital in Catania without circular projection

Fig. 24
One of the reused attic bases in the cathedral of Catania

Fig. 25
Attic base in the garden of the Museo Regionale Paolo Orsi, Syracuse

Fig. 26
Example of an attic base from the collection of Heritage Malta (f9)

Fig. 27
Example of an attic base from the collection of Heritage Malta (f18)

Fig. 28
One of the Byzantine attic bases uncovered in the Cathedral of Catania

Fig. 29
Octagonal column in Syracuse

Fig. 30
Section of the octagonal column in the collection of Heritage Malta (f50)

Fig. 31
Front view of the octagonal column in the collection of Heritage Malta (f50)

Fig. 32
Fragment of a reeded column shaft at Castell' Ursino

Fig. 33
Fragment of a reeded column shaft at Castell' Ursino
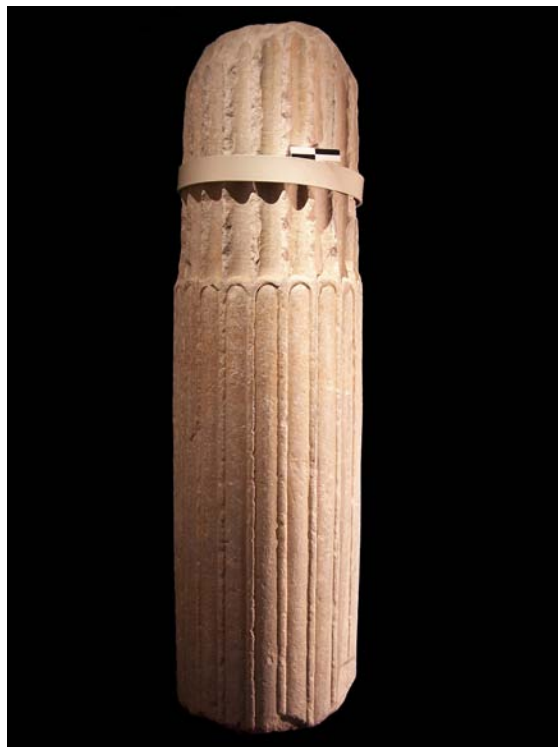
Fig. 34
Reeded column on display at the Rabat Domus

Fig. 35
Fragment of a reeded column shaft of Globigerina Limestone

Fig. 36
Fragment of a reeded column shaft of Coralline Limestone

Fig. 37
The Corinthian capital of Sicilian influence on display at the Rabat Domus (f 45)

Fig. 38
Detail of the foliage adorning the capital (f45)

Fig. 39
The Corinthian capital of Sicilian type from Noto
(Wilson: 18, fig. 13a)

Fig. 40
The same capital from Noto
(Lauter Bufe 1987: taf. 16, n. 32)

Fig. 41
Marble Corinthian capital from Malta imitating those of Sicilian influence (f85)

Fig. 42
Terracotta Capital from Tindari
(Lauter Bufe 1987: taf 9, n. 27)

3

St. Leonard Cave Church, Lunzjata l/o Rabat

Keith Buhagiar

Geological Considerations

The Maltese Islands lie between the Latitude of 35.48° and 36.05° north and the Longitude of 14.11° and 14.35° east, in the central Mediterranean Sea, 93.3 km south of Sicily, 357.3 km north of Tripoli and 289.7 km east of Tunis. The largest islands in the archipelago are Malta, Gozo and Comino respectively. Malta has a total land surface area of 153 sq km and a maximum length and width of 27.4 km and 14.5 km (Fig. 1).

Dating to the Oligo-Miocene era of the Tertiary period, the Maltese archipelago is entirely composed of sedimentary rock which started to form in a marine environment between 30 to around 6 million years before present.[66] Four distinct rock layers constitute the basic geology of the archipelago and when undisrupted by land faulting the horizontal stratification from bottom to top reads as follows: (1) Lower Coralline Limestone, (2) Globigerina Limestone, (3) Blue Clay, and (4) Upper Coralline Limestone.[67] Based on micro-chemical similarities, this classification takes the Greensand layer as being the lowermost stratum of the Upper Coralline Limestone deposit and contradicts older classifications which regarded the Greensand deposit as being a completely distinct entity from Upper Coralline Limestone.

An exposed Upper Coralline Limestone deposit of Mtarfa Member limestone dominates the Lunzjata region. Four subdivisions of Upper Coralline Limestone have been identified in Malta, all of which are carboniferous in nature. The Mtarfa Member stratum occupies the lowermost spectrum of the Upper Coralline deposit. The thickness of the Mtarfa Member deposits varies from twelve to sixteen metres and is composed of massive to thickly bedded carbonate mudstones and wackstones which can be cut and quarried with relative ease, as opposed to other Upper Coralline Limestone strata.[68] The Mtarfa Member stratum directly overlies Blue Clay. Being a deposit of an impermeable nature, Blue Clay is responsible for the formation of an aquifer commonly referred to

[66] G. Zammit-Maempel, *An Outline of Maltese Geology*, (Malta, 1977), 18. See also M. Pedley, M. Clarke, P. Galea, *Limestone Isles in a Crystal Sea*, (Malta, 2002), 18.
[67] M. Pedley et al. ibid., 35.
[68] K. Buhagiar, *Medieval and Early Modern Cave-Settlements in North-West Malta, South of the Great Fault – A Field Survey and Gazetteer*, (unpublished Masters Thesis, University of Malta, 2002), 49.

locally as the *Perched Water Table*.[69] At Lunzjata, Blue Clay deposits are located in the Wied Liemu area, immediately below the west facing Mtarfa Member ravine, into the side of which the St Leonard cave-church was excavated. Such a geological setup largely boosts the hydrological potential of the Lunzjata estate which is serviced by a number of perennial water sources.

The Historical Evidence

One of the first documented instances for the Lunzjata estate is a will dating to 5th June 1418, by the Noble Margarita d'Aragona,[70] who was to leave her entire country estate surrounding the church of the Annunciation in the limits of Rabat, to that religious order which accepted to recite daily office and establish a monastery there. Margarita d'Aragona had built and herself endowed the church of the Annunciation.[71] It is not known when the offer was exactly taken up, but a fragment of a document dated to 24th January 1441 mentions a Frater Periconus of the Carmelite Order and a Frater Guillelmus Cassar *Prior Conventus Sancte Mariae Nuntiaite* and suggests a Carmelite presence on the islands by at least this date.[72]

The course of events which led the Carmelites to become beneficiaries of Margarita d'Aragona's will, are obscure. Because the will was contested by Matteo del Caretto di Monteferrato, husband of Margarita d'Aragona's daughter Eleonora, her legal procurator was during the immediate aftermath, unable to execute her requests.[73] The 1441 document is the first known evidence that a friary had been established in Margarita d'Aragona's estate under the guidance of Frater Guillelmus Cassar. The toponym *Wied Liemu* (Liemu's Valley) may perhaps owe its origins to Frater Guillelmus.[74] An early fifteenth century document refers to the surrounding lands as *Santu Leonardu* (St Leonard), a toponym which probably came into being because of the presence of the St Leonard cave-church close by.[75]

Donna Margarita d'Aragona's will also furnished the beneficiaries of her Lunzjata estate with a house within the precincts of the Civitas. This, the friars could use as a base for their religious activity within the city. The house could also serve as a refuge in the case of raids by North African marauders. The property still stands and can be identified with the tenement at no. 3, St Peter Street, Mdina.

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[69] H. Bowen-Jones, J. C. Dewdney & W. B. Fisher, *Malta Background for Development*, (Durham, 1962), 43-7. See also P. Schembri, A. Baldacchino, *Ilma, Blat u Hajja*, (Malta, 1998), 41-3.

[70] Noble Maria d'Aragona was wife of Jacobus de Peregrino of Messina, who had rebelled against Frederick IV of Sicily. See M. Buhagiar & S. Fiorini, *Mdina – The Cathedral City of Malta*, (Malta, 1996), 70.

[71] Ibid., 339.

[72] The document dating to 26th March 1446 was copied from 'a parchment', into the notebook of Gian Francesco Abela in the early 17th century. See NLM ms.140, f.39v. The text is reproduced as Doc. II in A. Luttrell, 'The Augustinians at Malta: 1413', *Anacleta Augustiniana* vol. XXXVIII, Institutum Historicum Ord. S. Augustini (Rome, 1975), 295-302.

[73] M. Buhagiar, *The Late Medieval Art and Architecture of the Maltese Islands*, (Malta, 2005), 170.

[74] Ibid., 179.

[75] Ibid., 77.

The church of the Annunciation mentioned in the 1418 document was of unknown antiquity. Margarita d'Aragona's will made provisions for its maintenance and for the purchase of liturgical ornaments and furnishings. The church was reduced in size and largely rebuilt anew during the course of the late seventeenth century, after the Carmelite Convent was transferred within the walls of the Civitas.[76]

The Cult of St Leonard

St Leonard the Hermit was a Latin saint who was born towards the end of the fifth century in the province of Gaul. He was a Frankish noble in the court of Clovis I and was converted to Christianity along with the king on Christmas day of 496 AD by St Remigius, Bishop of Reims. Leonard managed to secure from the king the release of a great number of prisoners, and following the refusal of Episcopal honours offered to him by Clovis, he entered a monastery at Micy near Orléans, under the direction of St Mesmin and St Lie. According to tradition, it was at this stage that Leonard became a recluse in the forest of Limousin, where he gathered a number of followers. Having obtained, through prayer, a safe delivery for the Queen of the Franks, Leonard was granted royal lands at Noblac, 21 km from Limoges, where he founded the abbey of Noblac, around which a village subsequently grew.[77]

There appears to be no trace of a cult to St Leonard in liturgical books, church dedications, or inscriptions earlier than the eleventh century. He became one of the most popular saints of Western Europe in the later Middle Ages, his most notable patronages being pregnant women and captives. During the course of the twelfth century, St Leonard became one of the great saints of the Normans in South Italy and Sicily. The cult of the saint was boosted in popularity as a result of the release of Bohemond, son of Robert Guiscard the Norman and nephew of Count Roger from a Danishmend prison in Antioch in 1103. This event was elevated to an alleged miraculous status and led to the proclamation of the saint as the patron saint of captives and slaves. Following his release, Bohemond, a charismatic leader of the First Crusade, visited the Abbey of Noblac, where he made an offering of gratitude. At around the same time, Noblac was establishing itself as a stage in the pilgrim route that led towards Santiago di Compostela in Spain. Pilgrims and patronage flowed to Saint-Leonard de Noblac and Leonard became one of the most venerated saints of the late medieval period. His intercession was credited with the release for prisoners, women in labour and the diseases of cattle and in iconography he is generally represented holding a pair of chains. His feast day is celebrated annually on the sixth of November.[78]

The cult of St Leonard probably filtered into Malta during the course of the eleventh and twelfth centuries and there are two documented instances of cave-churches having

[76] A detailed analysis and description of the church of the Annunciation falls outside the scope of the present study. For the history and an architectural appreciation of the church of the Annunciation and the adjoining convent see M. Buhagiar, *The Late Medieval Art and Architecture of the Maltese Islands*, op. cit., 170-2; M. Buhagiar & S. Fiorini, *Mdina – The Cathedral City of Malta*, op. cit., 339-50; S. Abela, *L-Ewwel Karmelitani f'Malta – 'Il-Lunzjata l-Qadima' 1418-1659*, (Malta, 1993).

[77] Refer to 'New Advent – Catholic Encyclopaedia' website on: http://www.newadvent.org/cathen/09178b.htm

[78] D. H. Farmer, *The Oxford Dictionary of Saints*, (Oxford, 1992), 296-7.

such a dedication. The first recorded instance dates to 1588 and centres round a place known as *Il-Hofra ta' Għar* (The Sunken Cave), which can be probably identified with the troglodytic church of *Tal-Mensija* in the modern settlement of San Gwann, Malta.[79]

The other church dedicated to St Leonard, located a few kilometres outside the Civitas and its Rabat, is the subject of the present study. Lunzjata is an area of rustic beauty and abounds in perennial water springs. The quaint seclusion and fertile nature of the site very probably provided an ideal springboard for the setting up of a troglodytic monastic station, a recollection of which is possibly portrayed by Rocco Pirri in 1638 and which makes reference to an oral tradition of hermits who around the start of the thirteenth century dwelt in caves in the Lunzjata area.[80]

The Troglodytic Phenomenon

The St Leonard cave-church, the practiced water management techniques and several troglodytic dwellings excavated into the side of an Mtarfa Member ravine at Wied Liemu are reminiscent of a troglodytic tradition which flourished during the late middle ages, in countryside areas of Malta, which possessed favourable geological formations.[81] The Maltese landscape is characterised by the almost complete absence of woodland vegetation and scarce soil deposits, leaving exposed the bare rock-face. This was instrumental in conditioning a type of architecture which was entirely stone oriented besides encouraging cave-dwelling. Most troglodytic dwellings are tied to the rural areas of the north and north-west sections of Malta.

Two distinct types of medieval troglodytic settlements have been identified in Malta. These consist of (a) the adaptation of a natural karst depression for settlement purposes, and (b) cliff-face settlements. Cave usage varies from (a) cultic worship, (b) human habitation, and (c) animal pens or agricultural storage spaces.[82] An example of a karst feature settlement is Ghar il-Kbir in the limits of Dingli, and involves the occupation of one or more caves hewn into the sides of an open-air, natural rock-hollow. Cliff-face settlements are located within the sides of ridges and valleys and involve the occupation of a series of natural or man-enlarged caves. The location of most troglodytic settlements suggests that their occupants possessed a sound geological knowledge of the local geology. Most are hewn within exposed Mtarfa Member deposits and command unobstructed views of the surrounding countryside area and the underlying fields.[83]

Dry-stone walls commonly screen a large section of the caves' entrance, leaving an arched or square-headed doorway as the only means of access. It is uncommon for screening walls to contain windows, but when available, these are represented by narrow slits located high up in the cave facade. The larger and more spacious caves were

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[79] M. Buhagiar, *The Late Medieval Art and Architecture of the Maltese Islands*, op. cit., 76.

[80] Ibid., 77. See also R. Pirri, *Notitae Siciliensium Ecclesiarum*, (Palermo, 1638), 84.

[81] K. Buhagiar, *Medieval and Early Modern Cave-Settlements in North-West Malta, South of the Great Fault – A Field Survey and Gazetteer*, op. cit., 46-58.

[82] Ibid., 48.

[83] Ibid., 53.

frequently internally partitioned by means of dry-stone walls, the scope of which was to divide the cave interior into a series of individual spaces.[84]

Several settlements are accessed by means of one or more well-defined footpaths, some of which are surfaced by means of a cobbled type of paving. In areas of difficult terrain, dry-stone ramps were often constructed in order to facilitate access to troglodytic settlements. Ramps were built parallel to the cliff-face and are similar in method of construction to dry-stone walls. The gap between the cliff-face and the rubble-wall was bridged by a soil and rubble infill and occasionally capped by means of a cobbled surface.[85]

The practice of adapting caves as houses or of hewing churches out of rock, provided little or no scope for architectural invention and development. Rock architecture was probably meant to reflect the influence of above-ground buildings and not vice-versa.[86] There is an almost complete lack of historical documentation for most of the surviving troglodytic remains and in the absence of an archaeological investigation their dating requires a measure of caution.

The Maltese troglodytic phenomenon reflects a deeply rooted Mediterranean tradition, well diffused in areas experiencing an arid or semi-arid climate and a lack of timber supply, but which on the other hand provided plentiful rock-cut shelters and an abundance of easily quarried stone.[87] Troglodytism was a widely diffused phenomenon in Medieval Sicily, and appears to have been boosted by the collapse of the grain markets and the subsequent economic recession of the fifth and sixth centuries. An increase in Saracenic incursions on coastal areas of Sicily during the course of the eight and ninth centuries encouraged demographic displacement to the more easily defended mountainous areas, an instance which probably further conditioned the settlers to resort to cave-dwelling.[88] The siting of local troglodytic settlements also parallels the Sicilian model. Sicilian cave-settlement location was dictated by the available geological profile and settlements were often sited in naturally defendable and difficult to reach places.[89]

The roots of Maltese late medieval troglodytism probably lies in the twelfth and the thirteenth centuries, where following the Norman reconquest of 1127, a spill into the countryside by the Muslim sector of the population may have taken place. This was presumably motivated by religious intolerance from the part of the newly established Latin garrison. In an attempt to safe guard their ethnic identity, the native population took to the countryside where enclaves of Muslim resistance were set up.[90] The local troglodytic tradition persisted well into the early modern period and was not a

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[84] Ibid., 50.
[85] Ibid., 50-1.
[86] M. Buhagiar, 'Medieval Malta: Its Hypogea, Cave Churches and Ecclesiastical Buildings', *Architecture in Malta I: Historical Aspects*, SACES, (Malta, 1986), 44.
[87] K. Buhagiar, *Medieval and Early Modern Cave-Settlements in North-West Malta, South of the Great Fault – A Field Survey and Gazetteer*, op. cit., 46.
[88] A. Messina, *Le chiese Rupestri del Siracusano*, (Palermo, 1979), 4-8.
[89] A. Messina, 'Forme di Abitato Rupestre nel Siracusano', *La Sicilia Rupestre nell Contest delle Civilta' Mediterranee*, C. D. Fonseca (ed.), (Catania, 1986), 245-50.
[90] M. Buhagiar, *The Late Medieval Art and Architecture of the Maltese Islands*, op. cit., 40.

phenomenon which was only registered in the countryside districts. In the 1530s, Jean Quintin describes the Birgu settlement as being dug into the hillock rather than built on it.[91] A number of families are also reported to have dug caves in the sides of the ditch surrounding Valletta and Cottonera in the late eighteenth century.[92]

Urban and Rural Troglodytic Churches

Caves were also used as places of cultic worship. The Apostolic Delegate Mgr. Pietro Dusina recorded several cave-churches in his 1575 visitation report.[93] There are two categories of Maltese troglodytic churches: (1) the urban, and (2) the rural.[94] Both share a number of common characteristics and are apparently the product of the same religious pressure and socio-economic conditions. Where present, their murals also speak a common iconographic language and point to a Sicilian-Byzantinesque context that hints a twelfth or thirteenth century date. During the course of the centuries, many cave-churches were subjected to a number of subsequent alterations. In many instances these almost completely erased all evidence accounting for the former cave setup.

Urban churches were often located within the precincts of palaeochristian hypogea and generally show a greater preoccupation with architectural elaboration and enhancement. The re-utilisation of catacombs as places of veneration often involved extensive re-cutting which resulted in the mutilation of several tombs. At St Paul's catacombs, one of the two large halls flanking the complex's entrance displays indications of having been converted into a place for cultic worship during the course of the twelfth and thirteenth centuries. It is also likely that its walls were decorated with cult images.[95] Examples of other urban rock-churches located within the suburbs of the Civitas are those of St Agatha, St Venera, Tal-Virtu, the Virgin of the Grotto and Abbatija tad-Dejr.[96]

The rural cave-churches are more simplistic and display a poorer degree of architectural sophistication than that evident in the urban churches. Various rural cave-churches survive on the island, the most important of which are the cave-church dedicated to St Nicholas in the limits of Mellieha,[97] and the cave-church of S. Leonard at Lunzjata outside the Civitas. In both instances, fragments of murals survive within, but are unfortunately in a precarious state of preservation.

The adaptation of catacombs and palaeochristian hypogea as cave-churches was also a widespread phenomenon in medieval Sicily, a practice which was intimately connected to

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[91] J. Quintin d'Autun, *Insulae Melitae Descriptio*, (Lyons, 1536), 31.

[92] K. Buhagiar, *Medieval and Early Modern Cave-Settlements in North-West Malta, South of the Great Fault – A Field Survey and Gazetteer*, op. cit., 56. See also J. Eynaud, *Carlo Castone Della Torre Di Rezzonico – Viaggio Di Malta Anno 1793*, (Malta, 1989), 61.

[93] For a reproduction of the Dusina visitation report see G. Aquelina and S. Fiorini, *Documentary Sources of Maltese History*, *Part IV – Documents at the Vatican, Malta: Visita Apostolica no. 51, Mgr Petrus Dusina 1575*, (Malta, 2001).

[94] M. Buhagiar, *The Christianisation of Malta*, (Oxford, 2007).

[95] M. Buhagiar, *Late Roman and Byzantine Catacombs and Related Burial Places in the Maltese Islands*, BAR International Series, (Oxford, 1986), 52-5.

[96] M. Buhagiar, 'Medieval Malta: its Hypogea, Cave Churches and Ecclesiastical Buildings', op. cit., 39-49.

[97] K. Buhagiar, 'The San Niklaw Cave-Settlement', *Melita Historica*, Vol. XII no. 2, (Malta, 1997), 131-7.

the revival of the Christian faith which had dwindled greatly during the Muslim occupation of the island.[98] Another affinity between Malta and Sicily is evident in the cave-church of Abbatija tad-Dejr in Rabat where parallels to the Grotta dei Santi at Monte Almo in Sracuse were noted. In both instances, the motif chosen for the decoration of the apsidal cap is of the Crucifixion and the Annunciation.[99]

Description of the Remains

The St Leonard cave-church is accessed via a concrete-clad footpath and steps which from the northwest end of the Lunzjata car park perimeters past the edge of the ravine and gives access to the cave entrance (Fig. 2; Plate 3). There is so far insufficient evidence to establish if this has replaced a cobbled passageway which formerly serviced access to the cave. Cobbled footpaths commonly facilitated access to rural troglodytic settlements and appear to have been a common man-made accretion to the Late Medieval landscape in areas of difficult terrain. Many cobbled footpaths have in recent years either been destroyed or buried beneath concrete paving.[100]

A dry-stone wall screens the west-facing cave entrance, and the only means of access into the interior is through a 0.9 m, wide square-headed doorway (Fig. 3 'a'; Plates 1 & 2). The gap between the cave roof and the northwest section of the screening wall is bridged over by roughly faced ashlars (Plate 16). Such a method of roofing was commonly resorted to in other local cave-settlements in a bid to regain more internal space without having to undergo the more labour-intensive process of reshaping the cave interior.[101]

The cave-church is excavated into the brittle Mtarfa Member deposit and appears to have experienced at least two separate phases of development, which in the absence of further archaeological investigation are difficult to date. The current internal setup is the product of the cave's final phase of occupation and consists of an irregular-shaped cave with an east-end cylindrical apse, built partly of ashlars, and partly of wet-rubble (Fig. 3 'c'). The use of faced stones is only limited to the skeletal framework of the arch and the roof slabs bridging the gap between the keystone section of the arch and the adjoining wet-rubble wall (Plates 4, 5 & 7). Several coatings of a mortar rendering and white washing were noted in the apse area, over which painted decoration was applied, and traces of which still survive (Plates 14 & 15). The mortar varies from one to one and a half centimetres in thickness. Abutting the apse is a rectangular-shaped, wet-rubble altar (Fig. 3 'd'; Plate 4). The central floor area is paved by means of a flagstone paving (Plates 5 & 17). Another section of flagstone flooring survives in the northeast end of the cave (Fig. 3 'b'; Plate 13).

A wall-niche in the southeast corner of the apse probably provided a convenient space for the keeping of sacred vessels used during the celebration of mass (Fig. 3 'e'; Plates 5 & 6). The wall-niche is stylistically similar to a rectangular recess located in the

[98] A. Messina, 'Trogloditismo Medievale a Malta', op. cit., 116-117.

[99] M. Buhagiar, *Late Roman and Byzantine Catacombs*, op. cit., 117.

[100] K. Buhagiar, *Medieval and Early Modern Cave-Settlements and Water Galleries in North-West Malta South of the Great Fault*, op. cit., 50-1.

[101] Ibid., 51-2.

southeast corner of the apse, at the church of the Annunciation at Hal Millieri, similarly used for the keeping of sacred vessels. The 1575 Pietro Dusina report found such niches to be liturgically inappropriate, and ordered their substitution by gilt wooden tabernacles that were to be mounted on the altar itself.[102] Two other wall niches are present in the southeast corner of the cave-church (Fig. 5).

A rock-cut bench perimeters the south rock-wall of the cave (Fig. 3 'f'; Plates 8 & 17) and recalls the *dukkien* or stone bench which furnished several of the Maltese Late Medieval countryside churches. At the Church of the Annunciation at Hal Millieri, a low stone bench was fitted in between the wall piers in order to provide a limited form of seating accommodation.[103] Similar benches were a common feature to the Late Medieval town house. It is possible that within a domestic context, stone benches also served the purpose of beds on which mattresses could be spread out at night, or rolled up and put away during daytime.[104]

A mutilated fresco in the southeast corner of the cave-church (Fig. 3 'g'; Plates 8 - 12), which measures 87 by ca. 182 centimetres, betrays Sicilian Renaissance elements and is stylistically datable to the late fifteenth or early sixteenth centuries. The painting's precarious state of preservation does not facilitate its critical appreciation. The mural has more over suffered form a loss of pigment and the head and torso sections of the image appear to have been vandalised at an unknown date (Plates 9 & 10). The surviving sections of the painting point towards a work of pedestrian quality. It is painted in an apparent fresco technique and shows St Leonard in a full length, three-quarter profile, standing against a background of a low stone wall with a few trees showing behind it. [105] The saint's identity can be firmly established from the captive's irons, the saint's symbol in iconography. The complete absence of anecdotal elements echoes a Siculo-Byzantinesque tradition.

Mario Buhagiar has tentatively attributed the St Leonard painting to Antonio Pulcella, a Carmelite friar documented in the interim 1496-1508 period and who seems to have thrived from paintings commissioned by local village churches during this period.[106] Pulcella entered into many contractual agreements for the execution of altar pieces and wall paintings. The fact that none of Antonio Pulcella's paintings can be identified deprives the art historian of knowledge of his artistic manner and technique, and Pulcella's connection with the mural of St Leonard, therefore, remains uncertain. Pulcella is an unusual surname for Malta, and may have originated from the neighbouring Sicilian town of Puzallo.[107] Antonio Pulcella was also locally employed in the conservation and maintenance of a variety of ecclesiastical *objets d'art*. He undertook

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[102] M. Buhagiar, *The Late Medieval Art and Architecture of the Maltese Islands*, op. cit., 97.
[103] Ibid., 86.
[104] G. Wettinger, 'The Arabs in Malta', in *Malta: Studies of its Heritage and History*, (Malta, 1986), 87-104.
[105] M. Buhagiar, *The Late Medieval Art and Architecture of the Maltese Islands*, op. cit., 76.
[106] Ibid., 184.
[107] This is the modern day settlement of Pozzallo.

restoration works at the Mdina Cathedral between 1495-6. In the 1480s, he was commissioned to service the artillery and manufacture gun powder.[108]

Images of saints sharing the same stylistic and iconographic idiosyncrasies with that of St Leonard at Lunzjata were a feature common to Maltese churches at the turn of the sixteenth century. An almost complete cycle of such paintings survives in the cave-church of St Agatha in Rabat, Malta, where they may have replaced earlier Siculo-Byzantinesque icons.[109]

The St Leonard mural is not the only surviving element of painted decoration within the cave-church. The remains of a lime based mortar and daubs of red pigmentation still cover sections of the apse and south rock wall (Plate 14), and hint towards the former presence of an extensive decorative programme of which only a few traces survive. Insufficient data survives, however, to allow a reconstruction of the decorative motif employed.

In the absence of further archaeological investigations, the dating of the current cave arrangement is difficult to ascertain. Neither can the approximate construction date of the east end apse be ascertained. The wet-rubble technique employed in its construction can not be dated with any accuracy and was possibly first imported locally during the Saracenic or sub-Saracenic period, and remained in use until at least the early seventeenth century.[110]

An assessment of the tool marks preserved in the rock-walls of this subterranean sacred space, permit a partial reconstruction of the former cave setup, which appears to have experienced two distinct phases of occupation (Fig. 4). The former cave apparently had narrower proportions in its north to south axis, but extended further westward by several more metres. The changes brought about to the general cave setup appear to have been dictated by the natural process of weathering and erosion. Cracks and fissures in the cave roof close to the present entrance are symptomatic of a partial roof collapse caused by the weathering and the erosion of the brittle Mtarfa Member layer (Plate 3). Cliff-face detachment appears to have also substantially modified the external cave appearance. This necessitated the reconstruction of the present cave screening wall. Cliff dislocation in the Lunzjata area is being further enhanced by the erosion of underlying clay deposits due to water action. The current access passageway is also probably the result of post cliff-face dislocation repair works (Plate 3). The present cave screening wall abuts against a section of the St Leonard mural, and shows that the screening arrangement is posterior in dating to the mural (Plates 9 & 10).

The interior space lost due to the process of cliff recession was probably made good for by extending the north and south extent of the cave by ca. a metre in each direction. The former north – south extent of the cave is still delineated by the lower roof section of the extended areas and a slightly elevated floor level (Fig. 5). The rock ceiling of the extended areas is only ca. two metres high, as opposed to the ca. three and a half metre

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[108] M. Buhagiar, *The Late Medieval Art and Architecture of the Maltese Islands*, op. cit., 184-5.
[109] Ibid., 185.
[110] M. Buhagiar & S. Fiorini, *Mdina – The Cathedral City of Malta*, op. cit., 51-2.

high ceiling in the central cave area. The rock walls of the extended areas also display a slightly cruder finish. The surviving paving section in the northern end of the cave, and the dry-stone screening wall, both appear to be post cliff-face detachment alterations.

Hydrological Supply

A water gallery is excavated into the Mtarfa Member deposit directly below the St Leonard cave-church. It provides the surrounding area with a perennial water supply and is largely responsible for boosting the agricultural potential of this section of the Lunzjata valley. Identical hydrological systems are common features to areas of the Maltese countryside which possess similar geological stratifications and are evidence of past human interventions on the landscape.[111]

Galleries are generally easily identified from their rectangular shaped rock-cut entrance which is on average 0.8 metres wide and a bit more than 1.5 metres high. As is the case with the artificial spring at Lunzjata, there are instances where galleries are fronted by an underground water storage reservoir. The depth of these hydrological systems is unknown, but several of the water tunnels recorded and studied by the author may be well over half a kilometre deep and sometimes branch into one or more minor arteries. A canal carved into the floor of the gallery eases the flow of the water retrieved from the perched aquifer.[112]

The dating of the Maltese galleries is a task that requires caution. Not all galleries in any given area are necessarily coeval, but it appears that the majority of these artificial water springs are not recent efforts attempting to increase the hydrological potential and the agricultural yield of specifically selected areas, and have been tentatively dated to the Arab occupation of the island and its immediate aftermath, where new horticultural skills were introduced.[113]

Conclusion

It appears likely that past maintenance works and alterations within the cave-church were conditioned by agents of weathering and erosion which resulted in cliff-face detachment and a partial roof collapse. These were probably carried out by the Carmelite friars who since the first half of the 1400s have been in possession of the St Leonard cave-church and tenement.

Several wide fissures in the Mtarfa Member ravine, at close proximity to the St Leonard cave-church are a constant reminder to the ongoing natural process of cliff degradation. This process is being accelerated further by eucalyptus trees, planted in a field above the cave-church around a decade ago. Eucalyptus, is a fast growing alien tree species, well adapted to grow in Mediterranean-type climates, and is notorious for causing soil nutrient depletion.[114] The trees' roots penetrate deep into the ground and considering the brittle and friable nature of the Mtarfa Member deposit within which they lie, these are accelerating rock deterioration and stability and will eventually be the cause of further rock dislocation. This will adversely affect the structural stability of the St Leonard cave-church and threatens the site's preservation.

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[111] K. Buhagiar, *Medieval and Early Modern Cave-Settlements and Water Galleries in North-West Malta South of the Great Fault*, op. cit., 59-83.
[112] Ibid., 59-83.
[113] Ibid., 59-83.
[114] H. D. Allen, *Mediterranean Ecogeography*, (Harlow, 2001), 201.

The mural of St Leonard survives in a precarious state of preservation and is being subjected to constant damage by rain and irrigation water seepage, the damp microclimate present within the cave, and algal growth. This necessitates the drawing up and the implementation of a comprehensive conservation strategy to ensure the preservation of the site and fresco for future generations. The removal and cleaning of algal growth from the east and south walls of the cave by competent personnel will almost certainly lead to the uncovering of more decorative painted motifs and might provide sufficient data to allow a reconstruction of the church interior decorative programme.

The future archaeological investigation of the St Leonard cave-church and other key areas in the Lunzjata tenement might furnish the archaeologist and historian with further important data. Minimal soil deposits survive within the cave interior, but archaeological soundings of what lies beneath the stone slab flooring might provide interesting results apart from establishing whether any burials have actually taken place within the cave interior. The archaeological investigation of the agricultural land below the cave-church entrance might likewise lead to the detection of archaeologically relevant deposits.

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12 Fresco of St Leonard. Detail of tree cluster.

13 North extent of the St Leonard cave-church. Detail of flagstone floor and cave screening wall.

14 Daub of white-washed mortar in the altar area containing traces of paint decoration.

15 Detail of white-washed mortar rendering applied to the dry-stone walls in the apse area.

16 Roughly faced ashlars bridging the gap between the cave-roof and the dry-stone screening wall.

Flagstone floor detail. Visible in the foreground is the rock-cut bench (dukkien).

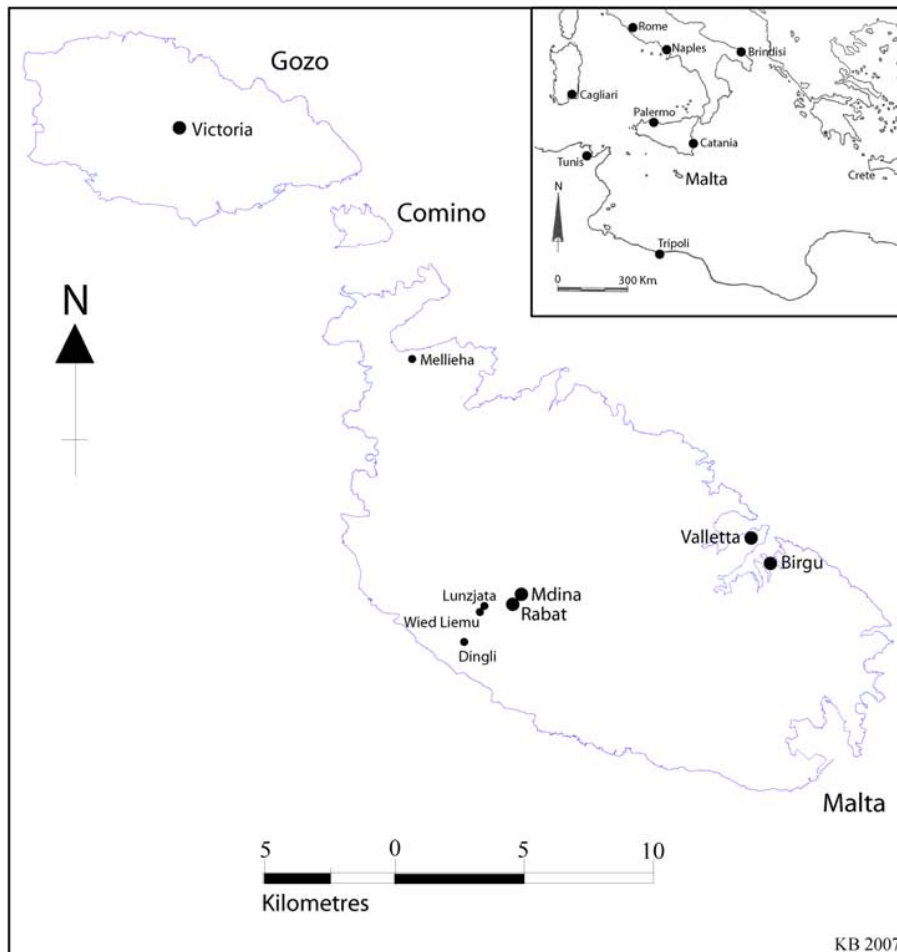



Fig. 1
Map of the Maltese archipelago showing the location of Wied Liemu and Lunzjata.

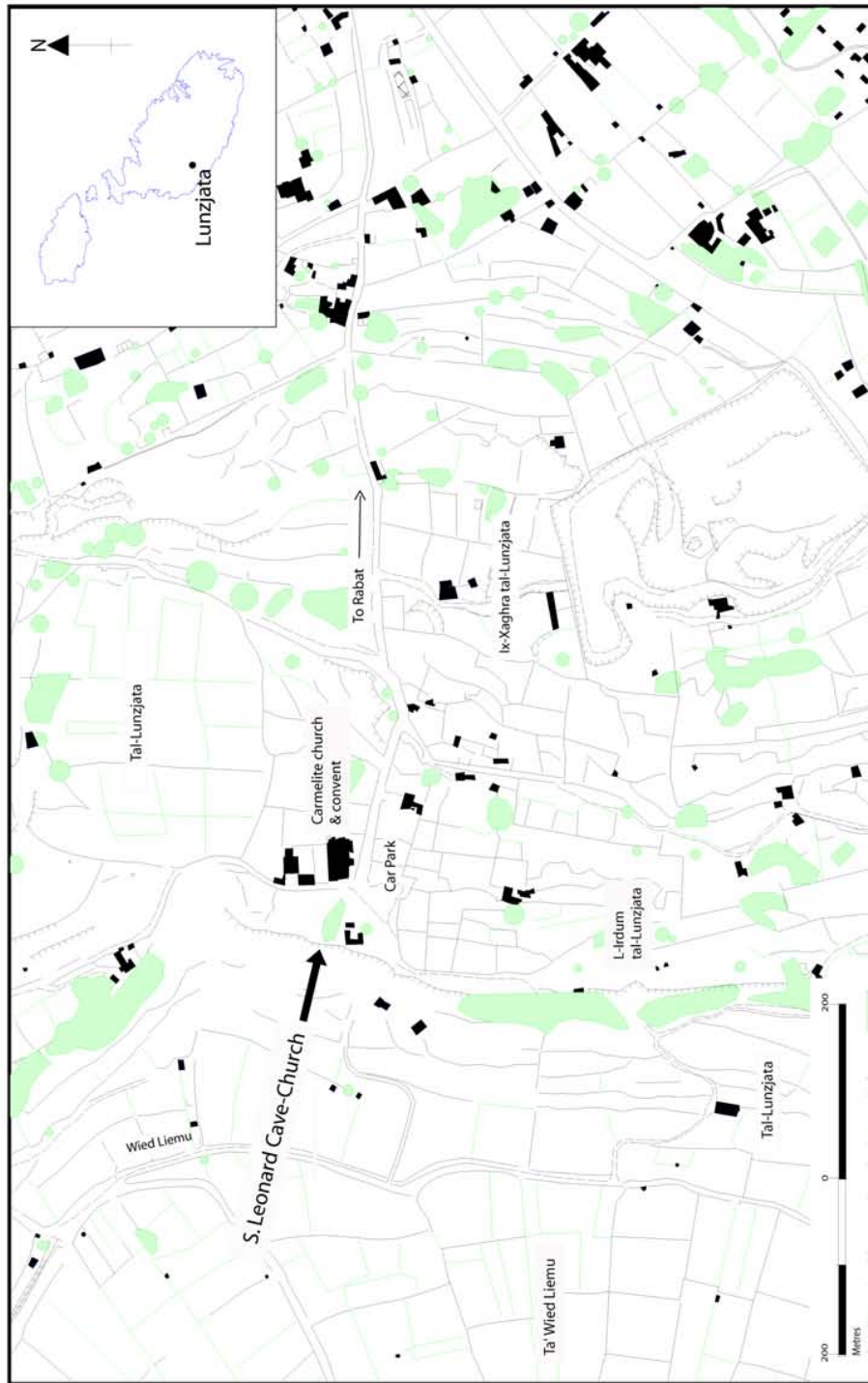
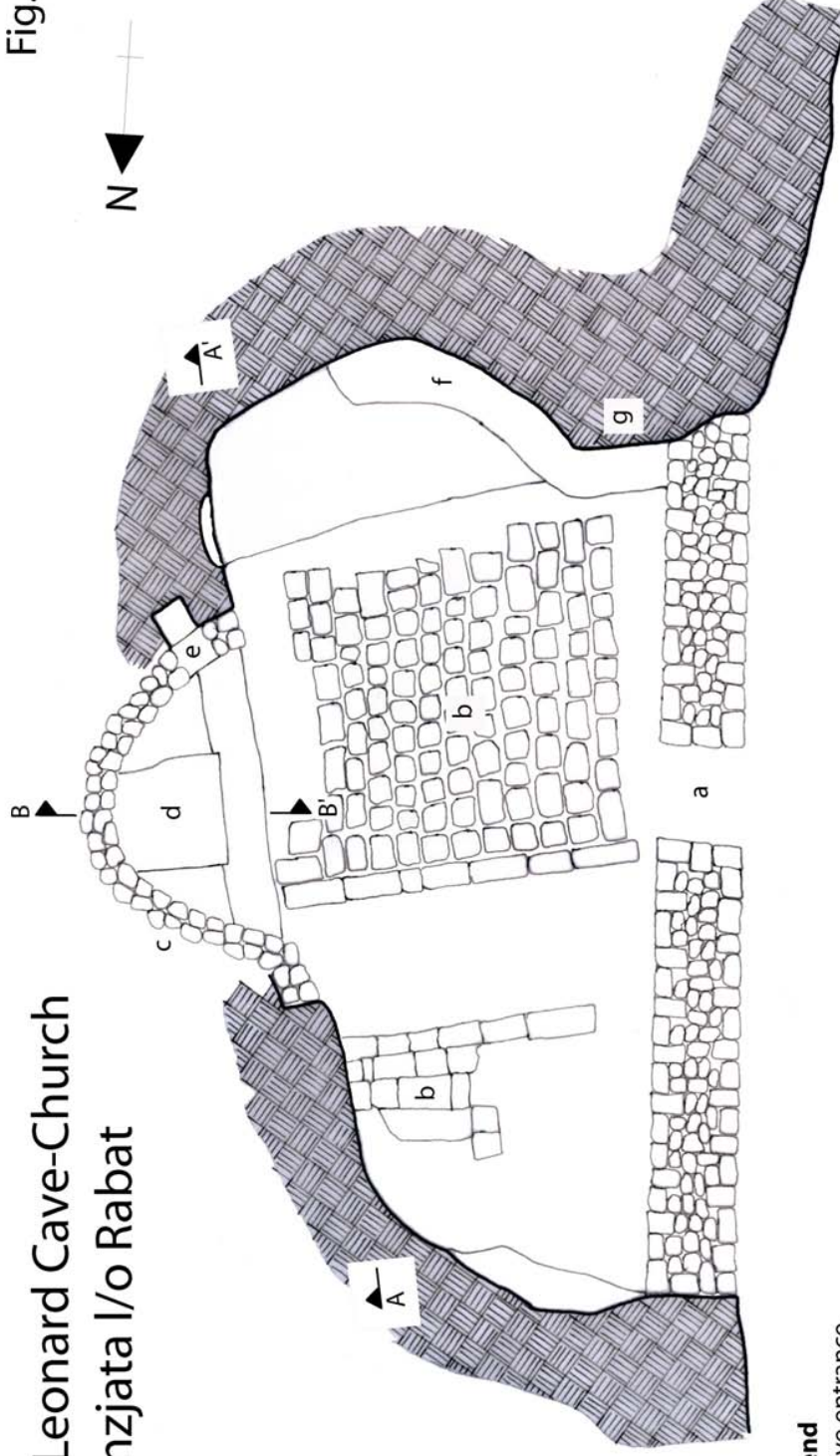
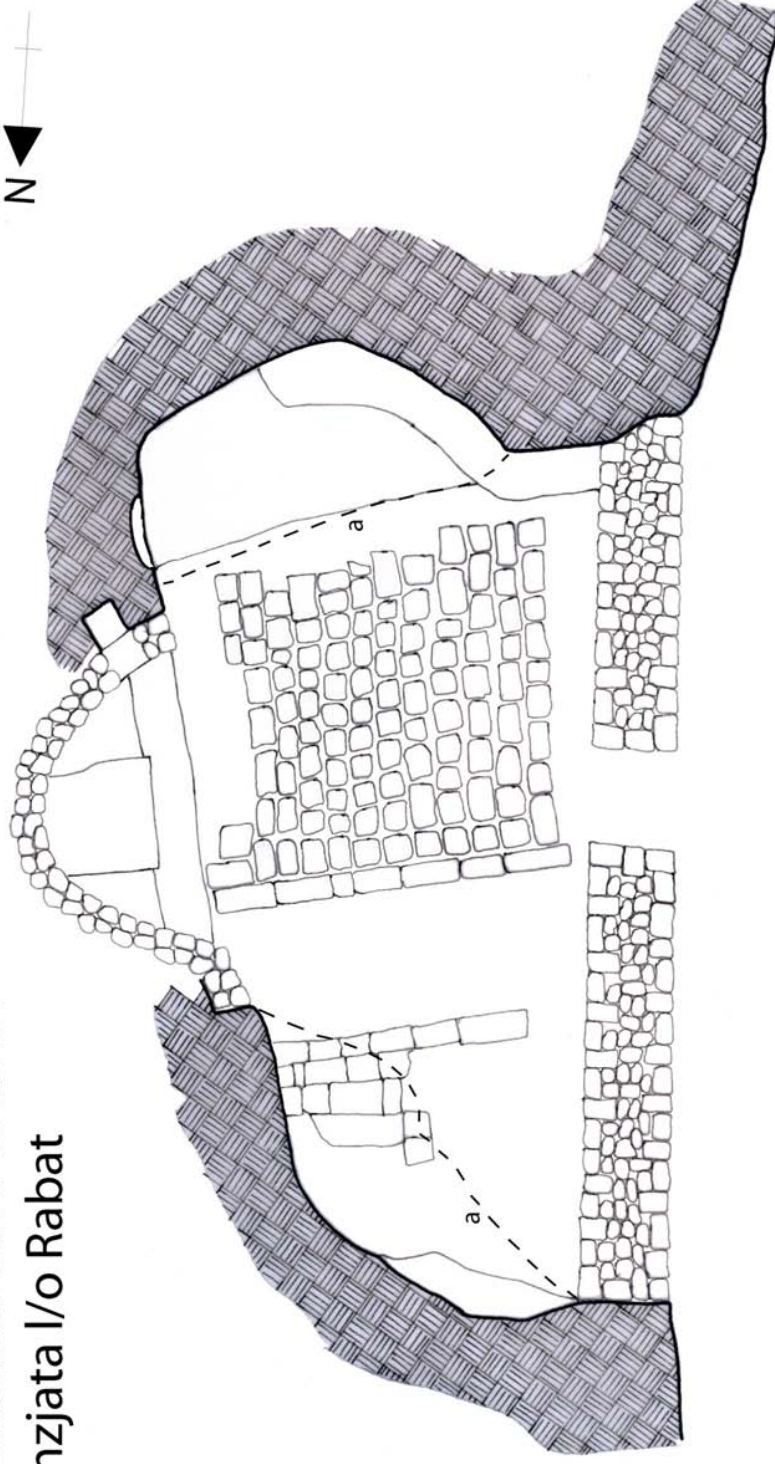



Fig. 2 Site plan of the Lunzjata area.

St Leonard Cave-Church
Lunzjata l/o Rabat
Fig. 3
N
B
B'
A
A'
a
b
b
c
d
e
f
g
Legend
a. Cave entrance
b. Falgstone paving
c. East-end apse built out of wet rubble and faced ashlar surrounds
d. Altar
e. Wall-niche possibly used for the keeping of sacred vessels
f. Rock-cut bench
g. Fresco of St Leonard
2
0
2
4
Metres
Surveyed & drawn by
Keith Buhagiar

St Leonard Cave-Church
Lunzjata l/o Rabat
N
a
a
Legend
a. Dotted line shows the probable extent of the former cave
2
0
2
4
Metres
Surveyed & drawn by
Keith Buhagiar
Fig. 4

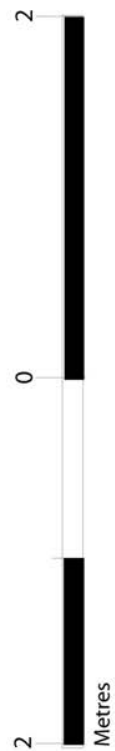
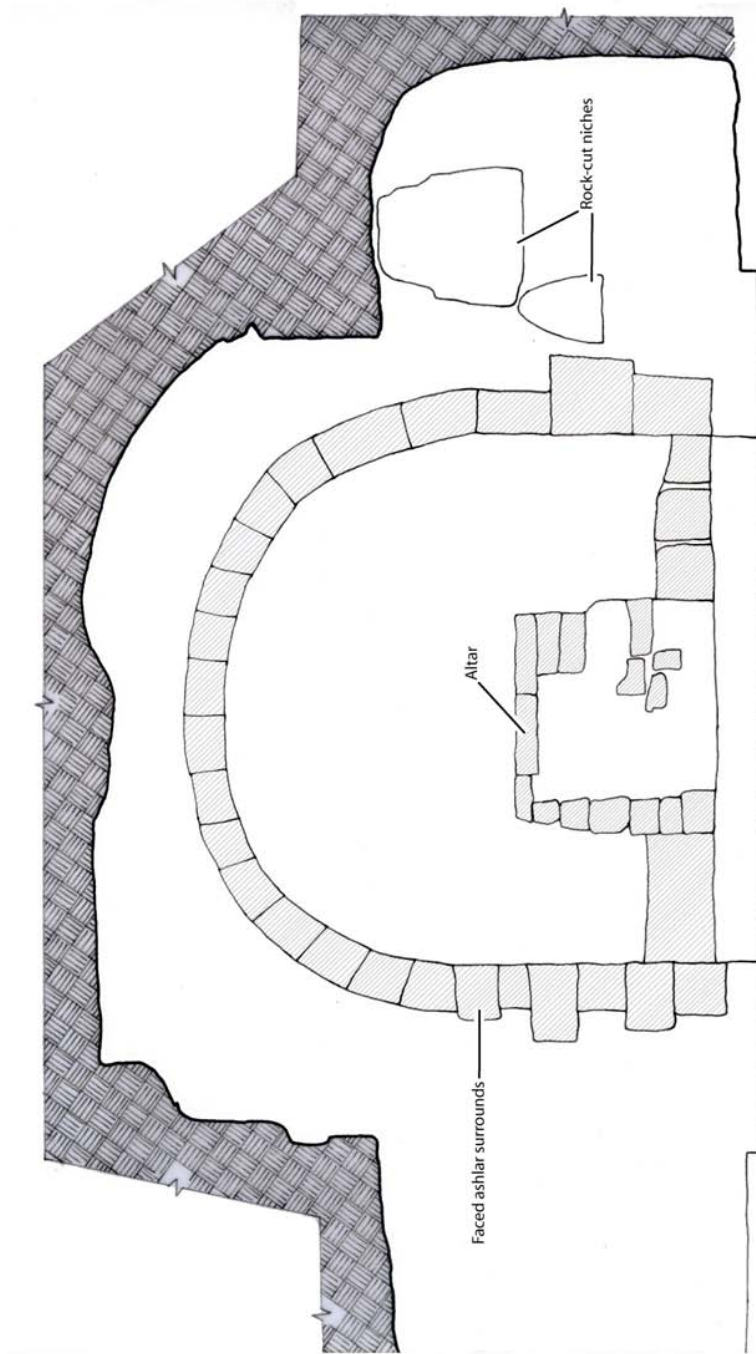
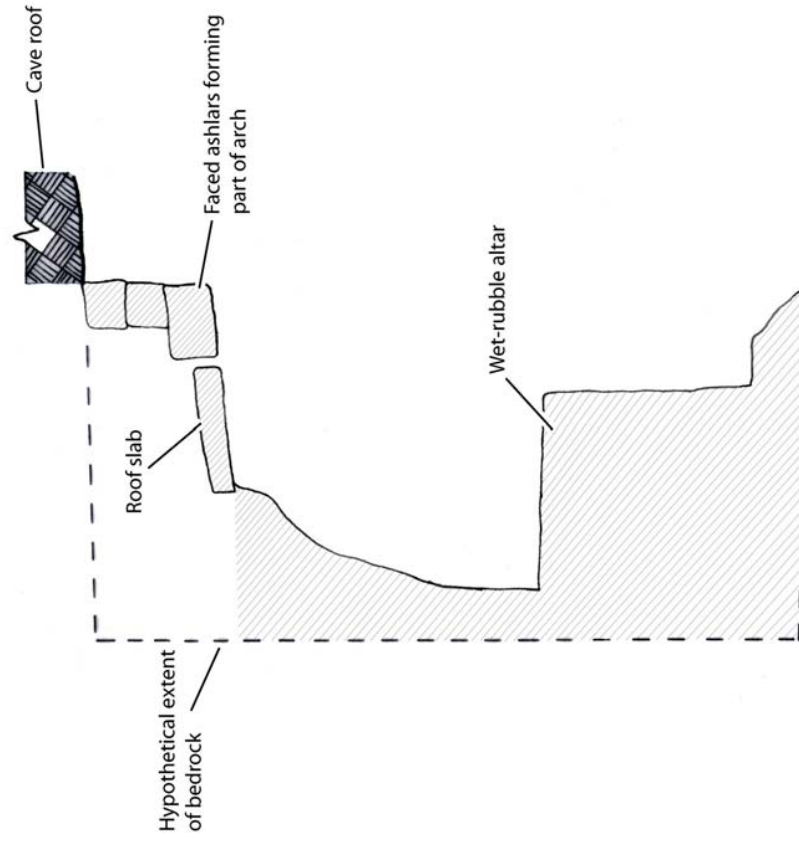
St Leonard Cave-Church, Lunzjata l/o Rabat
East Internal Elevation, Section A-A'
Fig. 5
Faced ashlar surrounds
Altar
Rock-cut niches
2
0
2
Metres
Surveyed & drawn by
Keith Buhagiar

St Leonard Cave-Church, Lunzjata l/o Rabat
Section B-B'
Fig. 6
Cave roof
Roof slab
Hypothetical extent
of bedrock
Faced ashlars forming
part of arch
Wet-rubble altar
0
2
Metres
Surveyed & drawn by
Keith Buhagiar

Plate 1

Dry-stone wall screening access to St Leonard cave-church.

Plate 2 Detail of square-headed doorway giving access to the cave

interior.

Plate 3 Concrete-clad footpath and steps giving access to the cave-church entrance. Fissures in the rock-face are symptomatic of cliff-face detachment.

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Plate 12

Fresco of St Leonard. Detail of tree cluster.

Plate 13 North extent of the St Leonard cave-church. Detail of flagstone floor and cave screening wall.

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Plate 15 Detail of white-washed mortar rendering applied to the dry-stone walls in the apse area.

Plate 16 Roughly faced ashlars bridging the gap between the cave-roof and the dry-stone screening wall.

Plate 17 Flagstone floor detail. Visible in the foreground is the rock-cut bench (dukkien).

4

The maritime cartography of the Sicily-Malta Channel

T. Gambin B.A.

Introduction

This report presents the results of a research project aimed at searching for and documenting nautical charts and other maritime related maps covering the Sicily-Malta channel.[116] Searches were made in collections held in a number of Maltese repositories, both public and private. Public repositories included the National Library of Malta, the National Archives and the Malta Maritime Museum in Vittoriosa. Furthermore, various online archives, including that of the National Maritime Museum in Greenwich, UK were also explored. All relevant maps were photographed, catalogued and presented on data cards in both hard and soft copies. It is envisaged that a number of benefits will stem from the results of this project. These include: 1. A greater awareness among researchers in both Sicily and Malta of the various maps held in the different repositories; and 2. A better understanding of the maritime cartography of the Sicily-Malta Channel through time.

Cartography and Hydrography

Map: 'a drawing or other representation of the earth's surface or a part of it made on a flat surface, showing the distribution of physical or geographical features'.[117]

Since prehistory, human beings have expressed a degree of spatial consciousness. Tangible evidence of such expressions includes rock paintings, depictions on stones and on jars. Although one may not perceive these pictures as maps in the modern sense, a thorough study and classification of these maps led Delano Smith to conclude that 'there is […] clear evidence in the prehistoric art of Europe that maps – permanent graphic images epitomizing the spatial distribution of objects and events – were being made as early as the Upper Paleolithic.'[118] This impulse to describe one's surroundings in a variety of pictorial forms is therefore datable to over ten thousand years ago.

A detailed description of how such pictorial depictions evolved through time (to become what we refer to today as maps) goes beyond the scope of this report. Nonetheless, it is important to note that over the centuries, just as the maps themselves changed, the reasons for the representation of space in a visual manner have also evolved.

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[116] The results of the project are presented on separate data sheets.

[117] Oxford English Dictionary

[118] Delano Smith, C. (1987) Cartography in the Prehistoric Period in the Old World: Europe, the Middle East, and North Africa in the Prehistoric Period in Harley, J. B. and David Woodward, editors *The History of Cartography, Volume 1: Cartography in Prehistoric, Ancient, and Medieval Europe and the Mediterranean* (Chicago University Press): 54-102.

Such reasons included the need to delineate political boundaries, to illustrate the topographic features in a territory as well as to place ancient remains within modern urban spaces.[119] However, in Medieval Europe, the use of a map as a means of guidance to move from place to another on land was not widespread.[120] In the next section, I shall proceed to illustrate how this was in marked contrast to the situation at sea.

Maps and Seafaring

Knowing where to go and how to get there are two essential aspects of any journey. This is more so when undertaking a journey by sea which would involve the crossing of large open featureless spaces. In ancient times, seafarers used a variety of methods to 'navigate' across such spaces including the use of stars and the sun, the clouds, birds,[121] change in the colour of the sea and the presence of vegetation on the surface of the sea. Furthermore, it is certain that some ancient mariners utilized the stars for navigation when sailing at night and out of sight of land.[122] When in sight of the coast, ancient seafarers were highly aware of a coastal landscape made up of a series of features, both natural and human-made. Tall cliffs and/or high hills and mountains provided essential landmarks whereas human features included lighthouses, tombs and even temples.[123] Knowledge of such features enabled ancient seafarers to recognize where they where. One can therefore infer that the mapping of maritime spaces may trace its roots back to this cognitive knowledge of seafarers.

The earliest surviving copies of maps specifically produced to aid seafarers date to the high Middle Ages and are known as portulan charts which are described by Campbell as 'the most geographically accurate maps of their time'.[124] The earliest versions were produced by the Venetians and Genoese on vellum.[125] At first glance, portulan charts look like traditional maps. However, upon closer examination one notices that on the one hand coastal features are prominent, whereas inland areas are unnaturally bare. Furthermore, rhumb lines protrude from compass roses and extend across the charts. Late medieval seafarers also had access to rutters, written sailing instructions with detailed descriptions of the landscape as seen from out at sea.[126] By combining the visual aid (map) with the

[119] Buisseret, D. (2003) The *Mapmakers' Quest – Depicting New Worlds in Renaissance Europe* (Oxford University Press): 26.
[120] Harvey, P.D.A. (1987) Local and Regional Cartography in Medieval Europe in Harley, J. B. and David Woodward, editors *The History of Cartography, Volume 1: Cartography in Prehistoric, Ancient, and Medieval Europe and the Mediterranean* (Chicago University Press): 464-501 -464.
[121] Hornell, J. (1946) The role of birds in early navigation in *Antiquity* 20.79: 142-9.
[122] Aubet, M.A. (1996) *The Phoenicians and the West: Politics, Colonies and Trade*, (New York): 168. For a detailed description of celestial navigation by Carthaginian seafarers see Medas, S. (2001) La marineria cartaginese. Le navi, gli uomini, la navigazione (Carlo Delfino Editore): 242-257.
[123] See Semple, E.C. (1927) The Templed Promontories of the Ancient Mediterranean *Geographical Review* 17.3: 353-386.
[124] Campbell, T. (1987) Portolan Charts from the Late Thirteenth Century to 1500 in Harley, J. B. and David Woodward, editors *The History of Cartography, Volume 1: Cartography in Prehistoric, Ancient, and Medieval Europe and the Mediterranean* (Chicago University Press): 371-463: 445.
[125] Kemp, P. (1988) *The Oxford Companion to Ships and the Sea* (Oxford University Press): 157.
[126] See Motzo B.R. (1947) *Il Compasso da Navigare, Opera italiana della metà del secolo XIII*. (Annali della facoltà di lettere e filosofia dell'Università di Cagliari, VII).

cognitive aid (rutter) the medieval mariner was able to undertake more informed sea journeys.

The main content of portulan charts was to remain unchanged until the advent of hydrography, the formal and scientific method of surveying the sea, coastlines and contours of the seabed. Although the use of instruments such as the quadrant and sextant contributed to more accurate charts as early as the first decades of the seventeenth century, formal hydrographic departments, such as those of France and Britain, were set up much later in 1720 and 1795 respectively.[127]

As a result of hydrographic surveys, representations of soundings and information on seabed topography increase thus making the 'maritime map' more complete. In modern times, these maps are referred to as nautical charts and these include accurate data that are systematically updated. Such charts are accompanied by modern pilot books which contain information on landfalls, approaches to harbours as well as details on the harbours themselves. These pilot books are not unlike the abovementioned rutters from the medieval period.

Today, all nautical charts are available on a single memory card, which contains hydrographic information of the entire world and is updatable via the internet.

Geographical Setting

As this present study covers a maritime space that is situated between the islands of Malta and Sicily I shall now proceed with a brief description of the area and its oceanographic conditions. The modern *Mediterranean Pilot* describes this stretch of sea as the Malta Channel[128] which 'separates the group [Maltese Islands] from the east end of the south coast of Sicilia [sic], and is about 45 miles wide. The depths are less than 200 m and it is free from off-lying dangerous shoals.'[129]

Wind and Sea Conditions

The prevailing winds in the area of study are those which blow from westerly and north-westerly directions. In the Sicily-Malta channel both the north-westerly and the north-easterly winds cause heavy seas and disturbed conditions may persist for several days between October and April.[130] Of particular note for the coastal waters off Malta is the large north-easterly swell that persists for up to two days after gales from the same direction have subsided. In both winter and summer, the main currents in the Malta Channel flow from the north west to south east in the direction of North Cyrenaica. [131] This current flows steadily at a rate of .50 to .75 of a knot but in winter west-north west gales can increase the speed of the current to 2 knots. Furthermore, strong easterly winds in spring and summer can temporarily reverse the flow of the main current.

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[127] Kemp (1998): 411.

[128] For the purpose of continuity I will continue to refer to this area as the Sicily-Malta Channel.

[129] Admiralty Sailing Directions (1978) *Mediterranean Pilot Volume 1* (United Kingdom Hydrographic Office): 180.

[130] Ibid., 13.

[131] Ibid., 13.

Historical Background to the Siculo-Maltese Connection

The Siculo-Maltese Connection dates back to the earliest stages of Malta's prehistory. Indeed, archaeological evidence confirms that the first settlers who reached Malta's shores originated from Sicily.[132] The presence of obsidian in the archaeological record of Malta points to a system of exchange that involved the crossing of the Sicily-Malta channel. This connection continued to develop after the dawn of recorded history when both islands were integrated into the commercial network of the Phoenician, and later Carthaginian, civilizations. The advent of Roman rule in Malta in 218 B.C. saw the island incorporated into the Sicilian province.[133] During this period, both islands were ruled by a *propraetor* who governed on behalf of the Roman Senate and the succession of emperors that emerged later on.

During the late Byzantine period, Malta and Sicily were connected through the prolonged war brought about by the Arab invasion of Sicily. Dalli has recently suggested that in the very early stages of the Arab conquest of Sicily (878-902) the Maltese Islands were used by Byzantine forces to relieve their comrades in Sicily.[134] After the fall of Malta in 870 it could well be that the island was repopulated by Arabs arriving from Sicily who brought with their language, culture and traditions.

During the later Middle Ages, the bond between the two territories was further entrenched. Following the arrival of the Normans in the central Mediterranean, the islands found themselves sharing the same political, cultural and commercial fates. Both Malta and Sicily found themselves within the spheres of influence of the Normans, the Angevins and finally, the Aragonese. This common succession of rulers shared by the two islands created both political and commercial ties that continued to exist beyond the arrival of the Order of St John in 1530. The continuing bond between Malta and Sicily was clearly manifested during the Great Siege of 1565 when a large Ottoman force besieged the Order of St John and Malta's inhabitants. It was a force sent from Sicily (led by its Viceroy Don Garcia) which brought victory to the besieged.[135]

During the Order's rule, Malta depended heavily on tax free imports from Sicily. By this time, the import-export transactions that Maltese merchants conducted were almost entirely linked with Sicilian markets. Throughout the Hospitallers' reign, the Maltese islands remained reliant on the importation of most essential staple goods from Sicily. Efforts by the Order to decrease Malta's dependence on Sicilian markets proved only partially successful.

Normal trade connections between Malta and Sicily were disrupted by the outbreak of the 'French Wars' (1792-1802, 1803-1815.), especially when the Republican armies of France penetrated into the Kingdom of Naples. Nonetheless, commercial activity was still present until Napoleon defeated the Third Coalition in 1805, a development which led to the loss of the Neapolitan kingdom's independence. This turn of events led to the

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[132] Trump D. H. (2002) *Malta - Prehistory and Temples*, (Midsea Books): 24

[133] Bonanno, A. (2005) *Malta - Phoenician, Punic, and Roman*, (Midsea Books): 123

[134] Dalli, C. (2007) Malta - The Medieval Millenium (Midsea Books): 48.

[135] Spiteri, S. (2005) *The Great Siege Knights vs Turks mdlxv* (Malta): 501.

integration of its territories into the Continental Blockade the following year. As Malta had become a British protectorate in 1800 and was thus considered an enemy of the French nation, the blockade would greatly enhance the commercial links between Malta and Sicily, albeit in a clandestine manner. During this conflict, British merchants became a common sight in the Harbour area as they found the island to be a secure port of call as they fled from their old settlements on mainland Italy that had been engulfed by warfare. The outbreak of plague in Malta in 1813 greatly disturbed the commercial ties that had developed between Malta and Sicily.

Following the end of the plague and the defeat of Napoleon in Italy, commercial links between the two islands were gradually re-built. In spite of this, the relationship between the two would never be as strong as it had been in the previous centuries as the Maltese islands were now integrated into the commercial network of the British Empire. This state of affairs stimulated commercial links with other British territories and dependencies, drawing many Maltese merchants away from Sicilian ports.

As the Mediterranean markets started to settle back into their normal routine, it became evident to the British authorities that the Maltese economy could not survive in the new economic reality that existed in the first half of the nineteenth century. After a period of laissez-faire economic policies, the British government engaged themselves in heavy investments to modernise Malta's economic infrastructure, especially that of the Harbour Area which had degraded during the previous two decades.[136] However, despite the decline of commercial shipping, heavy use of Malta's harbours by vessels of the Royal Navy ensured the continuity of maritime traffic in and around Malta and hence the Sicily Channel. This increased activity brought about new, state of the art charts such as those done by Smyth in the 1820s and Spratt in the 1860s.

The Crimean War (1854-6) would provide relief for Malta's economy as the increased presence of military supply vessels in the island's harbour provided an ample amount of patrons looking for smuggled merchandise.[137] The resulting period of prosperity was short-lived because the end of the war brought about an economic slump which was only ended over a decade later. Malta experienced a sustained economic boom that started in 1869, when the Suez Canal was opened through a joint Anglo-French venture. This event immediately yielded great benefits for the local market, a state of prosperity which would last until the late 1880s. The main thrust of the economy was the setting up of a coaling station in Malta where vessels could stop to replenish their fuel supplies. Goods originating from India were unloaded in Maltese harbours and transhipped elsewhere in the Mediterranean including numerous Sicilian ports.

Although increased fuel efficiency brought about the decline of this activity, the new geo-political scenario in the Mediterranean brought about with the rise of Italian naval power, meant that the British invested heavily in Malta's naval and military infrastructure. In the late eighteenth and early nineteenth century, the Sicily-Malta channel evolved into a stretch of sea where the two naval powers could face each other

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[136].Blouet B (1997), *The Story of Malta*, (Malta): 163.
[137] Ibid., 164

thus making strategic role more important than ever. This situation did in fact materialize during WORLD WAR II when the Sicily-Malta channel was the theatre of war between the Axis powers based in Sicily and the British powers based on Malta. Italian and German forces attacked British shipping attempting to supply Malta with much needed ammunition, foodstuffs and fuel. Likewise, British forces used Malta as a base from which they could attack Axis shipping travelling between Sicily and Libya.

Today, the Sicily-Malta Channel is a busy shipping route with commercial vessels sailing from Suez to Gibraltar (or vice versa) and vessels sailing from the Adriatic to ports in the south of France or Spain. Furthermore, a series of freeports including those Malta (at Marsaxlokk) and in southern Italy (at Gioia Taoro) ensure that numerous vessels continue to use this historically important channel.

The Mapping of the Sicily-Malta Channel through time

Given that the earliest maritime cartography covers the Mediterranean region, the Malta-Sicily Channel was often depicted at the centre of these medieval maps. One such example is the late fifteenth century portulan map by Jacopo Bertran (**Slide 1**) which shows the channel more or less in the centre of the chart. Besides a number of rhumb lines running across the channel in a variety of directions, the channel is, as is characteristic of contemporary charts, devoid of any navigational details such as soundings. The harbours of Malta are given prominence and are drawn disproportionably larger to the rest of the islands. On the other hand, a portulan of the central Mediterranean from a late fifteenth century *Isolario* (or island book) by Bartolomeo Sonetti clearly illustrates markings in the form of crosses on the approaches to Capo Passero, possibly indicating the *Isola delle Correnti*. Malta's south eastern approaches are also marked by such crosses which coincide with the Munxar reefs which are the main navigational hazards extant in the area.

During the course of the sixteenth century, the style and overall detail of the nautical side of portulan charts do not change dramatically. The Sicily-Malta Channel as depicted in a map of the central Mediterranean from an Atlas by Angelo de Conte Freducci is very similar in detail to that by Sonetti. Small islands, such as *Isola delle Correnti* and Manoel Island in Marsamxett harbour (Malta) are now marked in red but navigational hazards are still marked with black crosses. During the mid-sixteenth century, it is interesting to note that the Sicily-Malta channel was sometimes included in representations of the both the central and eastern Mediterranean as in the case in the Atlas of Joan Martines. Later in the sixteenth century, a map by Dutch explorer Willem Barentsz points to a break away from the earlier styles of nautical cartography. Although still devoid of hydrographic detail, the representations of Sicily and the Maltese Islands are more realistic than in earlier charts. Details such as the navigational hazard of Munxar reef are retained whereas others, such as the salt pans at Mellieha Bay are added. The inclusion of views on the upper part of the chart facilitates the recognition of some of the main ports in the area. Finally, this map also differs from its predecessors in the details depicted in the open sea, including the representation of contemporary ships and also sea monsters. This cartographic style was to be repeated and possibly copied throughout the seventeenth century by some cartographers based in the Mediterranean. The chart by Ambrosin of

1620 includes the sea monsters, contemporary vessels as well as the four views of major ports as depicted by Barentsz.

Not all portulan maps datable to the sixteenth century break away from the late medieval format and style. Charts such as that by Joan Oliva clearly illustrate the continuity of the aforementioned style. However, a cartographic feature particular to Malta and which does develop in the late sixteenth and early seventeenth century is that of the island's colouration. In earlier portulan charts, Malta was sometimes highlighted in gold (see detail of map by Bartolommeo Sonetti on **Slide 4**). In the latter years of the sixteenth century, possibly due to the expanding fame of the Order of St John after the victory in 1565, Malta is occasionally depicted in the colours of the Order: a white cross on a red background (see detail of map by Francisco Oliva on **Slide 25**).

In the latter half of the seventeenth century, the Malta-Sicily Channel is included in the map of the central Mediterranean included the maritime atlas by Francesco Maria Levante. Besides 25 maps, this volume includes a series of sailing directions, therefore combining the visual aid (map) with the descriptive (rutter). A number of such atlases were produced which varied in detail and in purpose. Of particular note is the *Nuovo Specchio di naviganti* by Girolamo Agostino which is devoid of written descriptions but consist of detailed maps of most of the major harbours of the Mediterranean. The inclusion of soundings (in *braccia*) for so many (and varied) locations is of major interest to the history of Mediterranean maritime cartography, mainly because of their inclusion in a single document.

The inclusion of soundings on Mediterranean charts can be traced back to the middle of the seventeenth century when Anthoni Jacobsz included the depths around Tabarca (in Tunisia) within a map of the central Mediterranean. The inclusion of soundings did not become common practice as is attested in the chart of John Seller (published in 1657) which is devoid of any such data. Soundings for the main port of Malta are included as an inset in a map of the central Mediterranean by Joahannes van Keulen, published in 1682 (**Slide 31**).

In 1720, the French established a Hydrographer's Department and it is therefore not surprising that some of the most notable advances made in the field of maritime cartography can be traced back to eighteenth century French cartographers such as Joseph Roux (**Slide 35**). His atlas of the Mediterranean, published in 1764, contains a chart of the central Mediterranean with some of the earliest representation of offshore soundings. The main concentration of soundings is between North Africa and Lampedusa but there are also limited readings present in the Sicily-Malta Channel. The 'vertical' configuration of this chart is also innovative setting a standard for the representation of the area that survives until the present day. One such example of such a 'vertical representation' is by the *Deposito Hidrografico* of Spain published in 1802 (**Slide 36**). Besides the modern orientation and inclusion of the recently conceived longitudinal coordinate system, this map contains soundings for parts of the Adriatic Sea but not for the Sicily-Malta Channel.

The establishment of British bases in Gibraltar and Malta enabled the British to maintain a substantial naval presence in the Mediterranean. It is therefore not surprising that in the first half of the nineteenth century, the British undertook intensive hydrographic surveys around and even beyond their bases. Of note for our area of study is the work of Royal Navy hygrographer W.H. Smyth who worked from Sicily after the Napoleonic wars during the first decades of the nineteenth century. He produced two important works; one written description of the Mediterranean entitled *The Mediterranean: A Memoir, Physical, Historical and Nautical* (London, 1854) and the other being the *Hydrography of Sicily and its Islands* (London, 1824) (see **Slide 39**). The continued presence of the British in Malta ensured that the area around the islands was continually surveyed by subsequent English hydrographers such as Captains Graves and Spratt who continually worked in the middle and latter half of the nineteenth century. Over the next 100 years, the works of Smyth, Graves and Spratt formed the platform upon which Admiralty charts of the Mediterranean were based.

In the course of the nineteenth century a number of other ‘maritime maps’, albeit not nautical charts per se, were issued. Such maps included depictions of maritime routes for steamers (**Slide 43**), postal vessels as well as the voyages of particular personalities such as those of Admiral Penrose published in 1820 (**Slides 37 and 38**).

Acknowledgments

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APPENDX

Views and Remark books found in the United Kingdom

This section contains a full list of views and Ships' Remark Books that were originally found at the United Kingdom Hydrographic Office (UKHO) and which have entries that are related to Sicily and Malta. Views are sketches of landfalls as drawn by naval officers when approaching from out at sea. The accurate drawing of these views was indeed part of a navy officer's training. The UKHO collection has many such views by trainees but it also has many of the original views by Smyth, Spratt and Graves which were eventually engraved on nautical charts.

Ships' Remark Books were kept on board British naval vessels so as to gather intelligence on harbour facilities, fortifications and the availability of freshwater, victuals and firewood from wherever a vessel would call. Such information enabled the British to gather a vast amount of information that made its may into the Admiralty pilot books.

Views

UKHO Archives – Views (Extract from Folio 2D)

Description	Folio	NP
Mediterranean Sea: Strait of Gibraltar: Gibraltar. English MS plan 'Form of anchoring in Gibraltar Bay wh(?) HM Fleet etc under Sir Charles Saunders Vice Admiral of Blue, 1762', showing coastline, hydrography, limited topography, remarks, references and HM Ships *Belliqueuse, Chichester, Newark, Hercules, Bienfaissant, Warspite, Neptune, Dorsetshire, Thunderer, Arrogant, Africa, Dunkirk, Anson, Preston, Somerset, Jersey, Firm* and *Montague* at anchor.	Folio 2D item 1. Page 1.	NP 45.
Mediterranean Sea: Strait of Gibraltar: Gibraltar. Views of 'Pontoon with sweep - Gibraltar Harbour', 'Mooring stones with dredger roller', 'Boulder raised in Gibraltar Harbour' and 'Mooring stones raised from Gibraltar Harbour with dredger roller and broken bucket' by Commander B Whitehouse, 1912.	Folio 2D and item 2. Page 2	NP 45.
Mediterranean Sea: Strait of Gibraltar: Gibraltar. Views of 'Debris raised from near Dockyard wall, Gibralter, 1913', 'Mooring stones' and 'Boulders' by Commander B Whitehouse.	Folio 2D and item 3. Page 3.	NP 45.
Mediterranean Sea: Strait of Gibraltar: Spain, S Coast and Gibraltar: Tarifa Point to Gibraltar Harbour. Views of 'Gibraltar - Detached Mole S End, No. 4' and 'New Mole Head No.1 and Lt Ho looking W', unassigned, 3 April 1905, and 'Tarifa Point Lt Ho', unassigned (four views). Former views: V10898/1, V10898/2 and V10866/1.	Folio 2D and item 4. Page 4.	NP 45 pages 89 - 99.
Mediterranean Sea: Spain, S Coast: Andalucia and Valencia: Gibraltar and Cabo de Gata to Denia: Europa Point to Cabo San Antonio. Views of 'Gibraltar - Detached mole, N End, looking NW, No.5, 3 April 1905, unassigned, 'Rock of Gibraltar from E', 'Strait of Gibraltar from E', 'Cape de Gatte from E' and 'Cape de Gatte', unassigned (V Stephens?), c1890, and 'View of Port Denia on E Coast of Spain reduced from original A3510 shelf Km and engraved on plate 1465' by Lieut Holbech RN, 1873. Former views: V10197, V10198, V10227, V10228 and V10898/3.	Folio 2D and item 5. Page 5.	NP 45 pages 98 - 188.
Mediterranean Sea: Spain, S Coast and Morocco, N Coast: Malaga and Ilas de Alboran to Tanger (Tangier). 'View of Town and Fortifications of Tangier taken from HM Bomb Vessel *Meteor* by W S Oliver - Mate, 24 October 1828', with views of 'Appearance of	Folio 2D and item 6. Page 6.	NP 45 pages 111 - 147.

Towers Cantales (a) and Marquis (b) when coming in one, of shoal water off Point to S'ward of Velez Malaga - WNW' and 'Appearance of leaning tower to E of Velez Malaga ... just open of Tower de Miz (?)' by Mr Hardies, Second Master, HMS *Weazle*, 1838, and 'Alboran Island' by Commander Graves, undated.

Mediterranean Sea: Spain, S Coast: Andalucia: Almeria: Cabo de Gata, vicinity. English MS logbook or diary belonging to Thomas Evelyn Williams, 2nd Mate, SS *Tinto*, pages 8 and 9 showing sketch views of 'Cape de Gata' and 'Two Friars' with remarks and observations. Includes references to Moss SS Co's SS *Atlantic*, 21 August 1880, and Captain Smith of SS *Tinto*.

Folio 2D and item 7. Page 7.

NP 45.

Mediterranean Sea: Spain, SE Coast: Andalucia to Valencia and Cataluna: Malaga to Golfo de Rosas. Views of 'Cape Santa Pola (Cabo de Santa Pola)' by Mr Hardies, HMS *Weazle*, 1838, 'Guadamar to Alicante', 'Coast from Malaga to Torros (Torrox)' with 'View of Columbretes E by S1/2S' and 'Appearance of Coast between Cape Palos (Cabo de Palos) and Cape Cerbera', unassigned, 1868, with 'Trabarca Castle SW3/4W No.5', unassigned and undated.

Folio 2D and item 8. Page 8.

NP 45 pages 134 - 173.

Mediterranean Sea: Spain, SE Coast: Andalucia to Valencia: Cabo de Gata to Alicante, vicinity. Views of 'Cape de Gatt NNE 20 Miles' by Alfred Miles, Midshipman, 1822 (?), 'Mount Villaricas' and 'Cape de Gata to Tower of Mesa' by Lieutenant Church, c1831 to 1838, 'Cape de Gatte NE by E distant 6 or 7 Leagues, 12 June 1799', unassigned, 'Carthegena (Cartagena), NNE 4 Miles: HM Ship *Excellent*, 1 September 1808, William Busby (?) Midshipman' annotated: 'Captain J West', and 'Isle Plana, o Tabarca (a) SW3/4W about 6 Miles' by Mr Hardies 2nd Master, HMS *Weazle*, 1838.

Folio 2D and item 9. Page 9.

NP 45 pages 152 - 177.

Mediterranean Sea: Spain, SE Coast: Murcia and Valencia: Cabo de Santa Pola to Cabo San Antonio. Views of 'Entrance to Carthegena (Cartagena)', 'Cape St Pola, SE Coast of Spain' and 'Cape St Antonio to Port Denia', annotated: 'Mr K Hardie, HMS *Weazle*, 1838' and '*Weazle* 1839' with untitled and unassigned sketch of harbour (possibly Cartagena).

Folio 2D and item 10. Page 10.

NP 45.

Mediterranean Sea: Spain, SE Coast: Murcia: Cartagena. View of 'Cartagena' with HMS *Royal Oak* at anchor taken by Lieutenant Commander C H Lush. Former file: H1136/1925.

Folio 2D and item 11. Page 11.

NP 45.

Mediterranean Sea: Spain, SE and E Coasts: Murcia, Valencia and Cataluna: Cartegena to Tarragona. Views of 'Entrance to Carthagina N by E - Cape Palos, NNW distant 7 Leagues', unassigned, 'Tarragona', unassigned, showing fortress, harbour and vessels at anchor, and '1 Xavier (Javea?) WNW1/2W', unassigned.	Folio 2D and item 12. Page 12.	NP 45.
Mediterranean Sea: Spain, E Coast: Cataluna: Barcelona, vicinity. Views of 'Cape Arabi to Cape Moiaira' including Altea Bay and 'Cape La Huertas towards Cape Benidorme', unassigned (same hand), 1868, with 'Sketch by an Officer of the *Formidable* when ashore off Llobregatt' River (S of Barcelona) and 'Sketch by an Officer of *Formidable* just after getting afloat', annotated: 'Henry Weld fecit' and 'From Lieutenant Canon, September 1843'.	Folio 2D and item 13. Page 13.	NP 45 pages 145 - 215.
Mediterranean Sea: Spain, E Coast: Valencia, Cataluna and Islas Baleares (Balearic Islands), vicinity. Views of 'L'Est du Cap de Creux' (Golfo de Rosas) and 'Est du Phare du Cap Bearn' from French Charts and 'Ivica (Ibiza or Iviza) and Formentera', with 'Cape Benidormi to Cape de la Nao' from HMS *Courageux*, 1793.	Folio 2D and *****, item 14. Page 14.	NP 45 pages 184 - 239.
Mediterranean Sea: Spain, E Coast: Cataluna and Islas Balearas (Balearic Islands): Barcelona and Mallorca (Majorca). Views of 'a) Appearance of Monjui Fort & Hill (Barcelona) bearing NE by E1/2E about 15 Miles', unassigned, with four views of 'Cape Blanco' (Mallorca?) drawn by John Richards, 31 March 1837.	Folio 2D and item 15. Page 15.	NP 45 pages 216 - 246.
Mediterranean Sea: Spain, E Coast: Islas Balearas (Balearic Islands): Menorca (Minorca). English MS 'Draught of Mahon Harbour and a profile view of part of Island Minorca etc Surveyed in 1764' drawn by J Clancy, Master, HMS *Centurion*, Captain Thomas Harrison, showing coastline, hydrography, ship's track, limited topography, township, fortifications and remarks. Includes sketch of British warship and boats, ornate cartouche and reference to landing by Duke of York. Scale: 2 inches to 1 mile approx.	Folio 2D and item 16. Page 16.	NP 45 page 270.
Mediterranean Sea: Spain, E Coast: Islas Balearas (Balearic Islands): Mallorca (Majorca): Palma. View of 'Palma Bay, Majorca' showing HMS *Royal Oak* taken by Lieutenant Commander C H Lush. Former file: H1135/1926.	Folio 2D and item 17. Page 17.	NP 45.
Mediterranean Sea: Africa, N Coast: Algeria and Morocco: Cabo Tres Forcas (Ras Uarc) to Cabo Tenes (Tenez). Views of 'Cape Tres Forcas', 'Saffarini (Islas Chafarinas) Islands', 'Habiba (Iles Habibas) Islands', 'Cape Sigale', 'Monagere Peak', 'Point Abuja' and 'Cape Tenez'	Folio 2D and item 18. Page 18.	NP 45 pages 308 - 345.

by Commander Graves, 1841 to 1846, with 'Cape Tenez or Nakkous to Palomas Island' and 'Cape Gileto' by Lieutenant W H Church, 1831 to 1838.		
Mediterranean Sea: Africa, N Coast: Algeria, Morocco and Tunisia: Islas Chafarinas to Iles de la Galite. English MS 'Diagram of Algiers Mole in 1816 shewing how their shipping were moored … No.1' and 'Diagram shewing Alteration … 30 March 1824 ... No.2' drawn by W Walker, showing coastline, harbour, fortifications and remarks. Views of 'Galita Island' by HMS *Racer*, 1865, annotated: 'H Dept 12 January 1917', 'Cape Tenez Lt Ho', unassigned (V Stephens?), c1890, 'Iles Zafarines a 6 Milles' and 'Phare du Cap Matifou' from French Charts, 1879, and 'Oran Bay', unassigned. Former views: V10200 and V11104.	Folio 2D and item 19. Page 19.	NP 45 pages 313 - 414.
Mediterranean Sea: Africa, N Coast: Algeria: Alger (El Djezair or Algiers). English MS text (two sheets) accompanying view of 'Algiers bearing SSW by Compass' by H Neale, showing township, harbour and fortifications.	Folio 2D and item 20. Page 20.	NP 45 page 360.
Mediterranean Sea: Africa, N Coast: Algeria: Alger (El Djezair or Algiers). English MS chart of 'Algier Bay Surveyed in 1764', drawn by J Clancy, Master, HMS *Centurion*, Captain Thomas Harrison, showing coastline, hydrography, anchorages, limited topography, township and fortifications. Scale: 2 inches to 1 League approx.	Folio 2D and item 21. Page 20a.	NP 45 page 360.
Mediterranean Sea: Africa, N Coast: Algeria and Tunisia: Oran to Iles de la Galite, vicinity. Views of 'Cape Tenez from E'ward distant 7 or 8 Miles', 'Cape Ras al Hamous', 'Cape Ras al Amuch (Ras al Hamous) about 6 Miles' and 'Cape Ferro (Ras al Hadeed)' by Lieutenant W H Church, 1831 to 1838, 'Cape Ras al Hamous' and 'Galita' by H Medley, with 'Ras al Hamous to Zerzehal (Shershel)' (or Cherchell), in three parts, unassigned (John Richards?), 20 May 1833.	Folio 2D and item 22. Page 21.	NP 45 page 345 - 398.
Mediterranean Sea: Africa, N Coast: Algeria and Tunisia: Oran to Iles de la Galite, vicinity. English MS logbook or diary belonging to Thomas Evelyn Williams, 2nd Mate, SS *Tinto*, pages 11, 15 and 19 showing sketch views of 'Ras-el-Amuch', 'Cape Caxine', 'Appearance of land about 30 Miles E'ward of Cape Caxine', 'Land about 24 Miles E of Cape Caxine', 'Cape Ferro' (three versions), 'Appearance of Land from Cape de Garde to Cape Ferro' and 'Galita Island' (five versions).	Folio 2D and item 23. Page 22.	NP 45.

Description	Folio	NP
Mediterranean Sea: Africa, N Coast: Tunisia: Iles de la Galite. Views of 'Galita', unassigned (John Richards?), 'Galita Islands' (four versions) by Lieutenant W H Church, 1831 to 1838, with 'Island of Galita' by W Raper, 1822.	Folio 2D and item 24. Page 23.	NP 45 page 414.
Mediterranean Sea: Africa, N Coast: Tunisia: Iles de la Galite, vicinity. Views of 'Galita Island', unassigned (J Richards?), 28 May 1833, 'Island of Galita', unassigned, 'Island of Galita, centre S by E 4 to 5 Leagues - sketched by Captain Rawstorne RN, May 1854', views of Iles de la Galite and Tunisian coastline from 'Sorelle Rocks' (five views) by Commander Nares, HMS *Newport*, 1870, and 'Cape Roux - West 3 or 4 Leagues distant', unassigned.	Folio 2D and item 25. Page 24.	NP 45 pages 414 - 419.
Mediterranean Sea: Africa, N Coast: Tunisia: Golfe de Tunis: Cap Bon, vicinity. English MS logbook or diary belonging to Thomas Evelyn Williams, 2nd Mate, SS *Tinto*, page 21 showing sketch views of 'Cape Bon, Zembra Island, Pantellaria Island etc (Sketches A to I)'.	Folio 2D and *****, item 26. Page 25.	NP 45.
Mediterranean Sea: Africa, N Coast: Tunisia: Cap Bizerte to Ile de Jerba. Views of 'Appearance of Island of Jerba from Anchorage, distant about 3/4 Miles', unassigned, 'Isle Pantellaria' and 'Canes (Canis) Isles' unassigned, with 'View of Town and Castle of Pantellaria' and 'Pantellaria W by S 4 or 5 Leagues' by Captain W H Smyth, 1815.	Folio 2D and item 27. Page 26.	NP 45 pages 415 - 483.
Mediterranean Sea: Tunisia to Malta and Sicily: Cap Bizerte, vicinity, Ghawdex (Gozo) and Kemmuna including Stretto di Messina. Views of 'N Entrance of Strait of Messina, Faro Lt Ho bearing SW1/2S distant 6 Miles', annotated: 'Reduced from A3290', 'Marsa Forno' (Marsalforn?), 1909, unassigned, 'South Camino Channel (Il Fliego ta' Malta)', unassigned (Commander Smyth, HMS *Stork*, 1893?), 'Marsa Forno', unassigned and undated, with 'Vue des Terres de Porto Farina prise a 4 Milles au NNE du Cap Sidi Ali el Meki' from French Chart. Former views: V10352 and V10842.	Folio 2D and item 28. Page 27.	NP 45 pages 420 - 491.
Mediterranean Sea: Africa, N Coast: Tunisia: Cap Bizerte to Cap Bon, vicinity. Views of 'Coast of Tunis from Cani Rocks' and 'Sidi Bushushar Range to Cani Rocks' by W U Moore, 1870, 'Cape Farina, Gulf of Tunis' and 'Mount Soliman to Cape Carthage', unassigned, 'Cape Carthage from Anchorage in Tunis Bay' by Lieutenant Raper RN, c1822, and 'Cape Carthage', unassigned (Lt W Church?), c1831 to 1838.	Folio 2D and item 29. Page 28.	NP 45 pages 433 - 436.

Mediterranean Sea: Africa, N Coast: Tunisia and Malta: Cap Bizerte to Cap Afrique and Ghawdex (Gozo). Views of 'Ruins of Mahdia, or Africa', unassigned and undated, 'Cala Sclendi' (three versions) and 'Cala Dueira (Dwerjra)' by Lt A S Wright, HMS *Russell*, 1909, 'Pantelleria W by S 15 Miles', unassigned, 'Plana Island Lt Ho, off Cape Farina, Gulf of Tunis' by Mr F Felix Smith, Yacht *Dracoena* (Enclosure to H51/1888), 'Cani Rock Lt Ho', unassigned (V Stephens?), c1890, and 'Cape Bon to Zembra' by HMS *Racer*, 1865, annotated: 'H Dept 12 January 1917. Former views: V10078, V10199, V10843, V10844 and V11103.	Folio 2D and item 30. Page 29.	NP 45 pages 433 - 460.
Mediterranean Sea: Africa, N Coast: Tunisia: Golfe de Tunis, vicinity. Views of 'Cape Carthage' by Lieutenant Raper RN, 1822, with 'The Goletta of Tunis' and 'Entrance to Bay of Tunis', unassigned and undated.	Folio 2D and item 31. Page 30.	NP 45 pages 436 - 438.
Mediterranean Sea: Africa, N Coast: Tunisia: Cap Bon to Monastir. Views of 'Cape Bon', 'Cape Bon and Zimbra' and 'Rabbit Island near Monastir', unassigned, 'Island of Coreat (Kuriat) or Rabbit Island', 'Monastir from Anchorage' and 'Town of Suza (Soussa). Castle SW by W1/2W', unassigned, with 'Soussa from Anchorage' by HMS *Firefly*, 19 June 1865, and 'Town and Castle of Bonah' unassigned.	Folio 2D and item 32. Page 31.	NP 45 pages 406 - 456.
Mediterranean Sea: Africa, N Coast: Tunisia: Cap Bizerte, vicinity. Views of 'Cap Roux' and 'Bizerta' both unassigned and 'Bizerta Castle SW1/2S, 5 August 1822' by Lieutenant Raper RN.	Folio 2D and item 33. Page 32.	NP 45 pages 416 - 423.
Mediterranean Sea: Africa, N Coast: Tunisia: Golfe de Tunis: La Goulette, vicinity. Views of 'Goletta of Tunis Lt Ho W by N1/2N', 'Cape Bon', 'Cape Bon, South', 'Zemberlotta SW1/2W' and 'Cape Bon to Island of Zembra', unassigned, with 'Zembra' and 'Goletta of Tunis NNW 7 Cables' by Commander Wilkinson, HMS *Firefly*, 1865.	Folio 2D and item 34. Page 33.	NP 45 pages 438 - 446.
Mediterranean Sea: Sicilian Channel: Tunisia and Sicilia (Sicily): Aegadean Islands: Zembra Island and Marettimo. English MS draft survey, unassigned and undated, with plans of Zembra to Zembratta and 'East Side of Maritimo' (Cape Bassano), showing coastline, detailed topography, triangulations, fortress and village of St Simone.	Folio 2D and item 35. Page 34.	NP 45 pages 445 - 520.
Mediterranean Sea: Africa, N Coast and Sicilian Channel: Morocco and Pantelleria to Malta, vicinity. Views of 'Island of Pantelleria SSW1/2W' by Mr Hardies, Second Master, HMS *Weazle*, 1838, 'Pantelleria, 26 August 1822' by Lt Raper RN, annotated: '40', 'Cape Demitri, Gozo (Ghawdex)' and 'Comino' by	Folio 2D and item 36. Page 35.	NP 45 pages 483 - 490.

HMS *Firefly*, 27 May 1865, 'Volcano NNW 7 Miles, August 1831 (Graham Shoal)' by Commander Swinburne, HMS *Rapid*', 'Gozo Lt Ho', unassigned, annotated: 'Received February 1884' with 'Cape Tres Forcas' and 'Cape Calalas (E side of Al Bucema Bay' by Lt Church, c1831 to 1838.		
Mediterranean Sea: Sicilian Channel: Malta, vicinity. Views of 'SE and NE extreme of Malta from 1 Mile E of Monsiar Rock' from Commander Spratt, 27 September 1853, 'View A, Dragat Point and Lt Ho' and 'View B, Cala Marco Tower on Salmona Palace' by Thomas Millard, HMS *Medina*, Captain Spratt, 'View of Gozo ... from Cape S Dimitri' by Captain T Spratt' with 'Fort Tigne open of Tigne Lt Ho', 'Fort Ricosoli' and 'Clearing Mark for patch in 10 Fathoms' by Staff Commander WCE Parker.	Folio 2D and item 37. Page 36.	NP 45 pages 488 - 506.
Mediterranean Sea: Sicilian Channel: Malta, vicinity. Views of 'Cape Dimitri E 8 Miles' and 'Appearance of Malta and Gozo, when passing Comino' by Captain W H Smyth, 1816, including depiction of vessels and waterspout, with 'Gozo' by G R W (monogram), 1863.	Folio 2D and item 38. Page 37.	NP 45 page 488.
Mediterranean Sea: Sicilian Channel: Malta, vicinity. Printed views of 'Koura Point with Tower and Battery of University' (St Paul's Bay), 'Salmona Palace', 'Appearance of Valetta', 'Castle and Lt Ho of St Elmo' (Valletta), 'St Lucian's Tower' (Marsa Scirocco) and 'Castle of St Angelo' (Valletta) by Captain W H Smyth, 1815, with views of 'Marsa Sirocco' by Lieutenant C H Simpson, HMS *Stork*, Captain Morris H Smyth, and 'Southern Comino Channel (Il Fliega ta Malta)' by Captain M H Smyth (Enclosure to S38/1894). Former views: V10352 and V10418.	Folio 2D and item 39. Page 38.	NP 45 page 491 - 507.
Mediterranean Sea: Sicilian Channel: Malta, vicinity. Aerial views (two photogrammetric arrays) of shoreline and shoal water off Malta, annotated: 'RAF Base, Malta. Benghaisa, Reef. 21 May 1932. 0930. F.6 4,000', 'Neg No. A/622/V, A/623/V, A/625/V and A/626/V'. Scales: 1/8000 and 1/5818 approx. Former file: H5010/1932 and M3416/32.	Folio 2D and item 40. Page 39 (on reverse of page 38)	NP 45.
Mediterranean Sea: Sicilian Channel: Malta: Valletta, vicinity. English MS 'Draught of Malta Harbour Surveyed in 1764' drawn by John Clancy, Master, HMS *Centurion*, Captain Thomas Harrison, showing coastline, hydrography, leading lines, township and fortifications with a 'Profile View of Entrance into Malta Harbour' with ornate cartouche and pencil sketches of landmarks. Annotated: '3'. Scale: 1 Mile (3.4 inches).	Folio 2D and item 41. Page 40.	NP 45 page 499.

Mediterranean Sea: Sicilian Channel: Malta: Valletta, vicinity. View of approaches to Valletta, unassigned and undated, showing harbour entrance, fortifications and three masted vessel.	Folio 2D and item 42. Page 41.	NP 45 page 499.
Mediterranean Sea: Sicilian Channel: Isole Pelagie and Malta, vicinity. Views of 'Marsa Scirocco', 'Marsa Scala (View B)' and 'Cape Dellamara' by 'George B Wilkinson, Lieut & Commander, HMS *Firefly*', 'Marsa Scirocco from Outer Benhisa Reef' by Captain Spratt, HMS *Spitfire*, with 'Isle Linosa', 'Isle Lampedosa to Isle Lampeon' and 'Isle Lampidosa SE by E1/2E 6 Miles, unassigned.	Folio 2D and item 43. Page 42.	NP 45 pages 507 - 517.
Mediterranean Sea: Sicilian Channel: Isole Pelagie, Malta and Sicilia (Sicily). Views of 'Marsa Scirocco, showing leading mark' by Lieutenant C H Simpson, HMS *Stork*, 1895 (Enclosure to S54/1895), 'Malta' (two views), unassigned, c1834 to 1835, 'Cape Granitola from NW', unassigned (Staff Commander Rafeson, HMS *Dreadnought*?) (Enclosure to HN mn11/1890), and print of 'Linosa from Southwest', unassigned. Former views: V10182, V10418 and survey: L335.	Folio 2D and item 44. Page 43.	NP 45 pages 507 - 537.
Mediterranean Sea: Tyrrhenian Sea and Sicilian Channel: Sicilia (Sicily), NW Coast: Aegadean Islands. Views of 'Maritimo, Favignana and Levanzo' and untitled (possibly Capo Cofano) showing island with castle, unassigned, 'Ustica', 'Cape St Vito' and 'Maritimo' by Lt W H Church, c1831 to 1838, 'Maritimo' by H Medley, 'Linosa Island' by HMS *Firefly*, 1865, and 'Maritimo SE1/4E, 1 September 1822' by Lt Raper, RN.	Folio 2D and item 45. Page 44.	NP 45 pages 514 - 524.
Mediterranean Sea: Sicilian Channel: Sicilia (Sicily), W Coast: Trapani, vicinity. Printed views of 'Castle of Maritimo' and 'Saracenic Tower on Mount St Julian', unassigned, with printed views of 'Marsala from Outer Shoal' and 'Mazzara (Mazara del Vallo) from Roads' by Captain W H Smyth.	Folio 2D and *****, item 46. Page 45.	NP 45 pages 520 - 535.
Mediterranean Sea: Sicilian Channel: Sicilia (Sicily), SW Coast: Sciacca to Porto Empedocle, vicinity. Views of 'Appearance of Lt Ho on Cape Rosello (Capo Rossello) when bearing E1/2N (View C)' and 'Appearance of Lt Ho on extremity of mole of Girgenti (ViewA)' annotated: 'W U Moore del' (HMS *Hydra*, Captain Shortland, 1867), untitled view showing 'Siaca' (Sciacca) and 'Cape St Marco (Cabo San Marco) by A V Drury with 'Mark for Clearing Melville Shoal (View B)' showing Girgenti Marina and Montserrada Peak (Monserrato), unassigned, 1867.	Folio 2D and item 47. Page 46.	NP 45 pages 542 - 620.

Description	Location	Notes
Mediterranean Sea: Italy: Sicilia (Sicily): Stretto di Messina and Porto Empedocle. Printed views of 'Channel of Messina from Anchorage at Faro Point' and 'Mole at Gergenti, as seen from Temple of Virgins' by Captain W H Smyth, c1815 to 1816.	Folio 2D and item 48. Page 47.	NP 45 pages 544 - 589.
Mediterranean Sea: Italy: Sicilia (Sicily), S and E Coasts. Views of 'Appearance of Magnisi Lt Ho' (Penisola Magnisi), 'Cape Santa Croce Lt Ho' and 'Appearance of Lt Ho on Avola Fort from North Buoy' (Augusta) by W U Moore, HMS *Hydra*, Captain Shortland, 1867, 'Cape Passaro W by S1/2S 2.5 Miles' by A Miles, Midshipman, 'Town of Alicata' by Captain W H Smith, 1816, with 'Cape Passaro' and 'Filfoth (?) Island' unassigned.	Folio 2D and item 49. Page 48.	NP 45 pages 547 - 568.
Mediterranean Sea: Italy: Tyrrhenian Sea: Sicilia (Sicily), N Coast: Marettimo to Islos Lipari. Views of 'Maritimo' and 'Cape Cofano' annotated: 'Outline of views engraved on plate 170 reduced from Captain Wilkinson's book', c1863 to 1865, with views of 'Lipari Islands' annotated: 'These Views Copied from Mr Atkinson's Book, 1800'.	Folio 2D and item 50. Page 49.	NP 45 pages 601 - 626.
Mediterranean Sea: Italy: Tyrrhenian Sea: Sicilia (Sicily), N and W Coast: Marettimo to Palermo. Views of 'Maritimo Castle, 12 July 1833' and 'West Coast of Sicily' showing 'Cape St Vito' to 'Cofano Peak', unassigned, 'Palermo Lt Ho', 'Pointe de Gallo' and 'Mount St Julian' by H Medley, c1831 to 1838, with 'Appearance of SW point of Sicily' by Captain W H Smyth, 1816, showing 'Cape Granitola to Ruins of Selinuntum' and 'An Algerine boarding a Polacre Brig'.	Folio 2D and item 51. Page 50.	NP 45 pages 520 - 626.
Mediterranean Sea: Italy: Sicilia (Sicily), E Coast and Stretto di Messina. Printed views of 'City of Taormina', 'Schiso Point' and 'Port of Catania' by Captain W H Smyth RN, published at Hydrographical Office, 19 July 1823 and corrected May 1873.	Folio 2D and item 52. Page 51.	Located between page 59 and 60. NP 45 pages 574 - 582.
Mediterranean Sea: Italy: Sicilia (Sicily), NW Coast: Trapani, vicinity. Printed 'View from Shoal off St Vito', 'View from Shoal off Emelia Point' and 'View of Trapani taken from Asinello Rock' by Captain W H Smyth, c1816 to 1823.	Folio 2D and item 53. Page 52.	NP 45 pages 525 - 528.
Mediterranean Sea: Italy: Sicilia (Sicily), S and E Coasts. Views of 'Sicily Lighthouses - Plans & Views (Sheet 2)' showing 'Girgenti Mole' and 'Rosello' by HMS *Hydra*, 1867, 'Syracuse (Siracusa)' showing 'St Joseph's Bridge', and 'Cape Granitola from NW', both unassigned (Staff Cdr Rafson, HMS *Dreadnought*?), 1889 to 1890, 'Cape Passero', unassigned, annotated: 'From HM *Wizard*'s Remark Book, 1869', with '(East Coast of	Folio 2D and item 54. Page 53.	NP 45 pages 537 - 562.

Sicilly) - Cape Passero Lt Ho', unassigned (HMS *Racer*, 1865?). Former views: V10170, V10182 and V11105.		
Mediterranean Sea: Italy: Sicilia (Sicily), S and E Coasts. Printed views of 'Syracuse (Siracusa), from ruins of Temple of Jupiter Olympus', 'Girgenti, from Temple of Esculapius', 'Town and Lighthouse of Augusta' and 'Syracuse' from landward, by Captain W H Smyth, c1816 to 1823.	Folio 2D and item 55. Page 54.	NP 45 pages 544 - 565.
Mediterranean Sea: Italy: Sicilia (Sicily), E Coast. Printed views of 'Port of La Bruca' (Brucoli?) with riverside fortress, 'Cape Passero bearing SSW about 6 Miles' and 'View of Cyclops', a rocky islet off 'Trizzo, under Mount Etna' and 'Cape Moline', by Captain W H Smyth, c1816 to 1823.	Folio 2D and item 56. Page 55.	NP 45 pages 557 - 580.
Mediterranean Sea: Italy: Sicilia (Sicily), E Coast: Siracusa (Syracuse). English MS 'Draught of Syracusa Harbour Survey'd in 1765' drawn by John Clancy, Master, HMS *Centurion*, Captain Thomas Harrison RN, showing coastline, hydrography, ship's track, anchorage, harbour, fortifications, sketches of vessel and land marks with ornate cartouche. Annotated: '3'. Scale: 880 fathoms (1.70 inches).	Folio 2D and item 57. Page 56.	NP 45 page 462.
Mediterranean Sea: Italy: Sicilia (Sicily). Views of 'Lighthouses of Sicily Island (Sheet 1)', drawn by W U Moore, HMS *Hydra*, 1867, signed: ' P Frederick Shortland, Captain', showing 'Cape Santa Croce', 'Magnisi' and 'Torre d'Avalo' with view of '(East Coast of Sicily) - Murro di Porco Lt Ho NE1/2E' by HMS *Racer*, 1865, annotated: 'H Dept 12 January 1917'. Former view: V11106.	Folio 2D and item 58. Page 57.	NP 45 pages 562 - 570.
Mediterranean Sea: Italy: Sicilia (Sicily), N and E Coasts. Views of 'St Joseph's Bridge (in line) with Mount Bibano leads midway between Maniace Castle & Plemmyrium Shoals' (Siracusa Harbour), unassigned, 'Mount Aetna (sic) from off Reggio, 1822', unassigned, 'Town of St Mary at Ustica' by Captain W H Smyth, 1815, and 'Augusta Harbour (plan A)' drawn by F W Jarrad, 1867, with depiction of an RN Paddle-Steamer (HMS *Hydra*?) off 'Avola Lt Ho'.	Folio 2D and item 59. Page 58.	NP 45 pages 562 - 596.
Mediterranean Sea: Italy: Sicilia (Sicily), E Coast: Augusta, vicinity. View of 'Augusta Harbour - Cantara Lt Ho', unassigned (Staff Cdr Rafson or Rafeson, HMS *Dreadnought*?), c1889. Former view: V10169.	Folio 2D and item 60. Page 59.	NP 45 page 569.

Mediterranean Sea: Italy: Sicilia (Sicily), E Coast and Stretto di Messina. Printed views of 'Mount Aetna (sic) - Schiso Point bearing SSW 7 Miles' and 'Plate 18 - View of Harbour of Messina' both by Captain W H Smyth RN, annotated: 'E' (monogram), 12 January 1858 (?)' and stamped: 'Royal Geographical Society - London'.	Folio 2D and item 61. Page 60.	NP 45 pages 582 - 584.
Mediterranean Sea: Italy: Sicilia (Sicily) and Calabria: Stretto di Messina, vicinity. English MS chart of 'Faro and Mole of Messina done in 1765' drawn by John Clancy, Master, HMS *Centurion*, Captain Thomas Harrison, showing coastline, hydrography, ship's track, harbour, townships, fortifications, sketches of land marks and vessel with remarks and observations. Annotated: '4'. Scale: 6 miles (5 inches approx).	Folio 2D and item 62. Page 61.	NP 45 page 589.
Mediterranean Sea: Italy: Tyrrhenian Sea and Stretto di Messina: Sicilia (Sicily), Calabria and Isole Lipari (Eolie). Views of 'Aeolian Islands from Penrose Rocks', 'Appearance of Coast of Sicily and Calabria on passing Milazza Lighthouse' and 'Appearance of Channel between Islands of Lipari and Vulcano' by Captain W H Smyth, 1814.	Folio 2D and item 63. Page 62.	NP 45 pages 602 - 611.
Mediterranean Sea: Italy: Tyrrhenian Sea: Sicilia (Sicily), N Coast and Isole Lipari (Eolie), vicinity. Printed views of 'Town and Castle of Milazzo', 'City of Lipari', 'Appearance of Channel between Sicily and Aeolian Islands' showing vessel in full sail (becalmed) and under tow from rowing boats, and 'Cefalu bearing E by S five Miles distant' by Captain W H Smyth.	Folio 2D and item 64. Page 63.	NP 45 pages 604 - 622.
Mediterranean Sea: Italy: Sicilia (Sicily), N Coast: Palermo. 'View of Palermo' drawn by T Masterson, Midshipman, approved by Lt Cdr R Moore, 20 March 1926. Former file: H676/1927.	Folio 2D and item 65. Page 64.	NP 45.
Mediterranean Sea: Italy: Tyrrhenian Sea: Sicilia (Sicily), N Coast and Isole Lipari (Eolie), vicinity. Views of 'Appearance of Land approaching Palermo from Westward', 'View taken from Anchorage on Exmouth Bank' (Lipari Islands) showing Stromboli and Panaria (Panarea), drawn by Captain W H Smyth, 1815, and 'Palermo Mole', unassigned, showing 'Mole Head Battery & Lt Ho' and 'Mount Pellegrino'.	Folio 2D and item 66. Page 65.	NP 45 pages 607 - 628.
Mediterranean Sea: Italy: Sicilia (Sicily), N Coast: Palermo. Printed views of 'Admiral's Bridge at Palermo' and 'Plate 10 - Bay of Palermo' by Captain W H Smyth, c1814 to 1823.	Folio 2D and item 67. Page 66.	NP 45 page 626.
Mediterranean Sea: Italy: Tyrrhenian Sea: Sicilia (Sicily) and Sardegna (Sardinia). Views of 'North Coast of Sicily', unassigned, showing 'Point di Gallo', 'View of Cape Tyndaris' (Sicily)	Folio 2D and item 68. Page 67.	NP 45 and 46 pages 617 - 706.

drawn by Captain W H Smyth, 1815, 'Western side of Palmas Bay' (Sardegna), unassigned, showing 'Antioch (Antioco) Castle', with 'Cape St Elias' and 'Cape Teulada' by HMS *Firefly*, 1865, and 'Cape Falcon' by Commander Graves.		
Mediterranean Sea: Italy: Sicilia (Sicily), N Coast: Palermo, vicinity. Views of 'Land Westward of Palermo Bay' by Lt W H Church, c1831 to 1838, 'East Point of Palermo Bay' by Captain W H Smyth, 1815, showing 'Cape Zaffarano' (Zafferano), with untitled and unassigned drawings showing 'Palermo' to 'Mount Pelegrino' and 'Cape Zaffarana'.	Folio 2D and item 69. Page 68.	NP 45 625 - 631.
Mediterranean Sea: France and Italy: Corse (Corsica) and Sardegna (Sardinia): Stretto di Bonifacio, vicinity. Printed views of 'L'Entrée des Iles de la Madelaine' from French Sailing Directions, 'Segue Veduta 18 bis - Passaggio fra le Isole Spargi, Maddalena e la Sardegna', 'Veduta 21 bis - Costa da Capo Testa a Castelsardo' and 'Veduta 18 bis - Passagio al Nord dell' Isola Razzoli e fra Barrettinelli e Isola Maddalena', 1885, from Italian SD's.	Folio 2D and item 70. Page 69.	NP 45 pages 636 - 647.
Mediterranean Sea: Italy: Sardegna (Sardinia), S Coast: Golfe di Cagliari. English MS 'Draught of Callarie Bay Survey'd in 1765', drawn by John Clancy, Master, HMS *Centurion*, Captain Thomas Harrison, showing coastline, hydrography, ship's track, anchorage, harbour, township and fortifications with sketches of land marks, vessel and ornate cartouche. Annotated: 'Michelot in his Draught of this Bay, shews two rocks ... from Cape St Rocco ... there is no such shoal etc' and '2'. Scale: 0.9 inches to 1 mile.	Folio 2D and item 71. Page 70.	NP 46.
Mediterranean Sea: France and Italy: Corse (Corsica) and Sardegna (Sardinia): Stretto di Bonifacio, vicinity. Printed views of 'Veduta 22 bis - Dall'Isola Rossa alla Foce del Fiume Coghinas', 'Segue Veduta 18 bis - Costa di Sardegna fino a Punto Falcone', 'Segue Veduta 21 bis - Costa da Capo Testa a Castelsardo' and 'Segue Veduta 22 bis - Costa di Castelsardo' from Italian Sailing Directions, c1883, annotated: 'A Porro dis, 1883' and 'E Parmiani Inc'.	Folio 2D and item 72. Page 71.	NP 46 pages 681 - 711.
Mediterranean Sea: France and Italy: Corse (Corsica) and Sardegna (Sardinia): Stretto di Bonifacio, vicinity. View of 'Lavezzi Beacon', annotated: 'R & R' (monogram?) (HMS *Growler*, 1872). Former view: V11190.	Folio 2D and item 73. Page 72.	NP 46.
Mediterranean Sea: France and Italy: Corse (Corsica) and Sardegna (Sardinia), N Coast: Stretto di Bonifacio, vicinity. Views of Coast of Sardinia, untitled and unassigned, showing 'The Brothers' to 'Thunder Valley', 23 May 1833, 'Monument on Cape Ciotto, near Lavezzi islet,	Folio 2D and item 74. Page 73.	NP 46 pages 707 - 713.

erected to crew etc lost in *Semittanti*', signed: 'RLH' (monogram), 'Lavezzi Beacon', unassigned, and 'Caprara Lt Ho WSW Asinara' signed: 'EHV' (monogram), from HMS *Growler*, 1872.

Mediterranean Sea: France and Italy: Corse (Corsica) and Sardegna (Sardinia), N Coast: Stretto di Bonifacio, vicinity. Printed views of 'Vue servant de Reconnaissance aux Bouches de Bonifacio en venant du NNE', '1ere Vue … aux Bouches de Bonifacio en venant de l'OSO' and '2me Vue ... aux Bouches de Bonifacio en venant de l'Ouest' from French Sailing Directions, c1831.	Folio 2D and item 75. Page 74.	NP 46 page 713.

Remark Books

Note: Vessels' names in capitals followed by the surname of the vessels' commander/s and by a description of the entire volume's contents. Some of the contents refer specifically to Sicily and/or Malta but some have a generic reference to the Mediterranean.

VOL 74 (C3)

Includes: REVENGE, Harrod, Adriatic-detailed directions with sketch plans, 1814; MYRMIDON, Gambier, Pirieus, Athens, 1806; KINGFISHER, Tritton, chart of the Bay of Unie, 1820; IMOGEN, Stephens, directions for Valona bay, 1813; REDWING, Down, detailed remarks Malta, Tunis, etc, 1812-14; REPULSE, Legge, Dardanelles and Constantinople, 1806-07; ROCHFORT, Schomberg, Sketch of Genoa Mole, 1821-22; WIZARD, Moresby, remarks on ports in Adriatic, 1812-13.

VOL 81 (C10)

Includes: CALEDONIA, Rowley, Straits of Mytelene with chart, 1834; RAINBOW, Franklin, General remarks in Mediterranean, 1831; MADAGASCAR, Elson (Master), fixing 3 uncharted islands, 1831; ACTAEON, Grey, Passage England to The Bosphorus, 1830-31; ST VINCENT, Senhouse, Survey of Graham Island and some views, 1831; MADAGASCAR, Elson (Master), Some sketch surveys of Zante island with lighthouse, 1832; Extract from letter from Franklin relating to lighthouses in Corfu channel, 1831; Dardanelles, Bosphorus and Black Sea, MSS by article published in the Nautical Magazine by Captain Middleton, c 1832; DONEGAL, Dick, Reporting disappearance of Graham Island, 1832; MASTIFF, Wolfe, Soundings off Albania, 1830; ST VINCENT, Elson (Master), beautifully drawn views of Naples etc, 1832; RAINBOW, Franklin, further general remarks of Mediterranean, 1831-32.

VOL 2 (Aii)

Includes: ALARM, Collins, West Indies, includes good detail, of interest is a certificate given to Mr J COOK, master 1763-66; ALARM, Jervis (later Earl St Vincent, Mediterranean 1770-71; ACTEON, Norwood, West Indies, with a description of 15 ports accompanied by maps 1764-65; AQUILON, Brooking, Newfoundland, long report of soundings 1765-66.

VOL 4 (BC)

Includes: BELLIQUEUX, Edwards, West Indies and W Coast Europe, 1760; BIENFAISANT, Balfour, Mediterranean including plan of Gibraltar, Tetuan and Mahon, 1762; BASILISK, Brice, Channel, including sketches of Isles of Scilly, Falmouth, 1760-61; CULLODEN, Barber; mainly W Indies but fine sketches and description also Milford Haven, "I found Captain Collins's draughts very correct", 1760; CRESCENT, Collingwood, W Indies, 1761-62.

VOL 7 (DE)

Includes: DEAL CASTLE, Brean, N W Europe including Heligoland, 1761; DUNKIRK, Best, Mediterranean including Constantinople, 1760-62; DOVER, Callender, Directions for New York, Cork, St Lawrence, 1760-61; DORSETSHIRE, Campbell, Portugal and Gibraltar with sketches, 1761; DUBLIN, Gascoigne, Leeward Islands, 1760-62; ENTERPRISE, Guy, E Coast of America, 1762-64.

VOL 9 (F)
Includes: FLAMBOROUGH, Reynolds, Mediterranean, 1763-64, FLORA, Collier, Baltic, 1771-73, FALCON, Baines, W Indies, 1771-72; FLY, Jones, English Channel, 1766-67; FERRET, Various, W Indies and Irish Sea, also chart of Campletown, 1764-72; FLORIDA, Teere, Passage to and from the Falkland islands with visit to Ascension, 1770-72.

VOL 11 (G)
Includes: GRAFTON, Hyde Parker and King, Manila and Malacca, Trincomalee and Cape of Good Hope, 1761-63; GUARLAND, Breaney, mainly E coast of America, 1764-67; GREYHOUND, Boga, E coast of Scotland, 1763-65, GRENVILLE, M Lane. Printed description of Coast of Labrador and holograph description. 1769-70; GUERNSEY, Chads, Newfoundland well written, 1766-68; GLASGOW, Allen, E coast of USA, 1767-71, GUADALUPE, Cornwallis. Mediterranean and W Coast America, 1766-73.

VOL 15 (J)
Includes: JAMAICA, Gidom, NE Coast USA, 1763-65; JAMES, Peyton, NE Coast America, 1773-74; JUNO, Towry and Falkoner, Spain and Portugal with some sketches, 1762; JUNO, Stott, Falkland Islands and elsewhere, 1770; JASON, Antrobus and Botterell, W Indies, 1768-71; JERSEY, Dickson, Mediterranean, 1768-69.

VOL 16 (Li)
Includes: LIVERPOOL, Lloyd, Voyage to Madras, some rudimentary sketches, 1764-67; LIVERPOOL, Braithwaite, NE coast America, includes plan of Great and Little Buren islands, 1769-72; LIZARD, Inglis, Mediterranean and NE coast America, 1771-72; LOWESTOFFE, Various, W Indies, 1763-72; LIVELY, Stewart, Mediterranean with a detailed account of Corsica, 1763-65.

VOL 18 (Mi)
Includes: MONTREAL, Crosby, Mediterranean, 1765-67; MONTAGUE, Smith, W Indies, 1770-71; MONTREAL, Jones, Nova Scotia with plans of Gaspey harbour, 1764; MERMAID, Jones, NE coast of America, 1765-71; MARTIN, Hayward, S Carolina, 1767-71.

VOL 19 (Mii)
Includes: MAIDSTONE, Antrobus, E coast America includes neat plans of Halifax, Boston and Rhode Island, 1764-65; MEDWAY, Tinker, Voyage to E Indies via Cape of Good Hope, St Helena etc, 1760-65; MODESTE, Hollwall, W Indies, 1761-63 MERLIN, Scott, W Africa, 1769-70; MINERVA, Brooks, Mediterranean, 1770-72.

VOL 20 (NOP)
Includes: NAUTILUS, Hester, W coast Africa, 1763; NAMUR, Harrison, Bahamas, 1762; PORCUPINE, Harwood, Gulph of Florida, 1 762-63; PEARL, Deane, Dover Strait, 1762; PALLAS, Clements, Mediterranean with well drawn plans showing fortifications; 1760; PORCUPINE, Harwood, well written account of St Lawrence, 1760-61; PRINCE OF ORANGE, Samuel Wallis (famous for his voyage round the world), descriptions in St Lawrence river with several plans, 1760.

VOL 21 (P)
Includes: PORTLAND, Stirling, W Indies, 1771-72; PRUDENT, Clerke, Tristan de Cunha & Madagascar, 1772; PRINCESS LOUISA, Burwood and Bover, W Indies with plans, 1763-65; PALLAS, Watson, E Mediterranean, 1771-72; PEMBROKE, Durell, E Atlantic, 1769-71; PHOENIX, various, W Africa well written, 1763-66; PRINCE GEORGE, Chapman, Irish Coast, 1767-69; PEARL, Leverson Gower, Gulf of St Lawrence, 1768-71.

VOL 22 (QV)

Includes: QUEBEC, Reynolds, W Indies, 1770-72; VIPER, Lobb, St Lawrence including plan of St Anne's Bay, 1765; VALLIANT, Duncan, W Indies, 1762; VULTUR, Hudson, Mediterranean well written, 1763-66.

OL 28 (TUVW)

Includes: THUNDER, Stuart, W Indies, 1763; THUNDER, Proby, SW Coast Europe, 1763; THETIS, Murray, Mediterranean, 1763; TERPSICHORE, Adams, Madagascar, St Helena etc, 1762; VANGUARD, unreadable, sketch plan of Havre, detailed account of various places in W Indies including details of batteries in Fort Royal Martinique, 1761-63; VESTAL, Lambert, Mediterranean, 1761-63; WAGER, Irving, N Coast of France with plans and sketches, 1761-62.

VOL 64 (B4)

Includes: ANDROMACHE, Nourse, Coast of E Africa, 1822-23; ARIADNE, Chapman, Madagascar with plans, 1824-25; LA CHIFFONE, Wainwright, directions for Persian Gulf, 1809-10; LEOPARD, P Heywood, Ceylon, 1802; NISUS, Beaver, Detailed extracts covering W Australia, W Indies, Mediterranean, Telemaque Shoals, Islands of St Paul and Amsterdam etc, 1811-14; SOPHIE, French, Persian Gulf with plans of Muscat and Basrah, 1822; SEA FLOWER, W F W Owen, remarks to accompany his survey of Straits of Singapore, 1807; Geographical positions of various places in N & S Atlantic, Austin, 1811; Remarks on Straits of Jubal, Curtis, 1802; Captain W F W Owen's rough memo of Borneo Sea, 1813; Sailing Directions for the Red Sea, Major Maule; Remarks on a voyage to the Red Sea in 1798 and India in 1805, TRIDENT and LEOPARD, unsigned (see Vol. 65 for duplicate or further remarks).

VOL 73 (C2)

Includes: CLEOPATRA, Peckell, directions for Ceuta, 1812; GANYMEDE, Spencer, Gulf of Venice, 1817-19; ANTELOPE, Galivey, Syracuse with a plan, 1807-08; GLASGOW, Maitland, numerous descriptions including Aboukir bay, 1817-20; MEDINA, Hay, E Mediterranean, 1821-22; SALSETTE, Bathurst, Constantinople, 1809-10; ZEALOUS, Hood, Aboukir Bay and Cyprus, 1798-99; References to Captain Hurd's and Captain Ward's plans of Algiers, 1816, author and date not given.

VOL 74 (C3)

Includes: REVENGE, Harrod, Adriatic-detailed directions with sketch plans, 1814; MYRMIDON, Gambier, Pirieus, Athens, 1806; KINGFISHER, Tritton, chart of the Bay of Unie, 1820; IMOGEN, Stephens, directions for Valona bay, 1813; REDWING, Down, detailed remarks Malta, Tunis, etc, 1812-14; REPULSE, Legge, Dardanelles and Constantinople, 1806-07; ROCHFORT, Schomberg, Sketch of Genoa Mole, 1821-22; WIZARD, Moresby, remarks on ports in Adriatic, 1812-13.

VOL 75 (C4)

Includes: BUZZARD, Smith, Details of enemy occupation of Tarragona and plans for an assault, 1813-14; Berwick, Collins, Toulon (the best equipped arsenal in the whole known world), 1793; ADVENTURE, Smyth, Manuscript of his Memoir to accompany his Atlas of Sicily, including remarks on earthquakes and tidal waves,1821-24; CYPRUS, Smith, details of forts at Venice, 1814.

VOL 76 (C5)

Includes: VOLCANO, Carol and Price, Alicante, Bermuda, Chesapeake and Mississipi, 1813; ROSE, Dundas, Pirieus and Smyrna, 1823; REVENGE, Burrard, Description of attack on Algiers, 1824; QUAIL, Johnston, Remarks on Greek islands, 1813; MAJESTIC, Cuthbert, Alexandria to Augusta, 1798; FREDERICKSTEEN, Nourse, Smyrna with sketch plan, Tetuan ("No Christians allowed"), 1810; DOVER, Drury, Algiers, where 1500 slaves were in bondage including 12 americans; REVENGE, Hart, Mouth of Rhone and Foz with sketch plans, 1813-14.

VOL 77 (C6)

Includes: Remarks and positions in Adriatic by Admiral Leveson Gower, 1815; RAINBOW, Waugh, Mention of eruption of Vesuvius on 25 December 1813, 1813-14; PHAETON, Wilkie (Master), plan of Tetuan Bay, 1787; LEONIDAS, Griffiths, Observations on a voyage to Kerson (in Black Sea) in 1785 in

French which was taken from a Frenchman, 1812; ELLICE, Longstaff, Discovery of the wreck of HMS ATHENIAN in Latitude 37° 45′N; Longitude 11° OO′E, 1806; ADVENTURE, Smyth, Extensive remarks on Sardinia, 1824; Description Barbary coast by Lieutenant Slater to accompany chart (E277), 1826; PEARL, Finch, Observations for positions ashore by F Beaufort, 1787-89; MONTAGU, P Heywood, Meridian distances, 1815.

VOL 78 (C7)
Includes: SYBILLE, Pechell, Well written remarks including account of skirmish with pirates, 1825-26; SEAHORSE, Stewart, Account of Greek islands, 1826; RALEIGH, Dalline, E Mediterranean with neat plans of Tripoli and Beruit, 1826-27; PEARL, Finch, Many places in Mediterranean, 1787-89; NAIAD, Spencer, Straits of Salamis and Salonica, 1825-26; MEDINA, Turton (Master), Directions for Dardanelles etc, 1825-26.

VOL 79 (C8)
Includes: ALACRITY, Nias, Blockading Navarino Bay, 1828; BLONDE, Lynas, vicinity of Navarino Bay, 1828; GAIATEA, Sullivan, Ports of the Barbary coast, 1828; PELORUS, Richards, description of Syracuse harbour, 1828; PARTHIAN, Hotham, Coast of Egypt where the PARTHIAN was wrecked, 1827-28; TALBOT, Spencer, Mediterranean generally; mention of wrecked Turkish fleet in Navarino bay, 1827-28; MONTAGU, Meridian distances by Captain P Heywood, 1815-16; MASTIFF, Copeland, observations in the Strait of Gibraltar, undated.

VOL 80 (C9)
Includes: Detailed directions for the Adriatic by Captain Symonds, c 1830; ASIA, Johnstone, Description of Turkish Fleet at Constantinople, details of forts etc, also detailed description of Algiers, 1829-30; MADAGASCAR, Spencer, Eastern Mediterranean also remarks by Thos Elson (Master), who sailed with Beechey to the Pacific and explored along N American coast to within 160 miles of Franklin's expedition, 1829-30; REVENGE, Thompson, neat chart of Suda Bay, 1829; Ionian Islands, directions and views, author unknown, presented by Mr Dessiou, 1830.

VOL 81 (C10)
Includes: CALEDONIA, Rowley, Straits of Mytelene with chart, 1834; RAINBOW, Franklin, General remarks in Mediterranean, 1831; MADAGASCAR, Elson (Master), fixing 3 uncharted islands, 1831; ACTAEON, Grey, Passage England to The Bosphorus, 1830-31; ST VINCENT, Senhouse, Survey of Graham Island and some views. (This volcanic island between Sicily and Malta was cause of some territorial claims until it subsided beneath the sea), 1831; MADAGASCAR, Elson (Master), Some sketch surveys of Zante island with lighthouse, 1832; Extract from letter from Franklin relating to lighthouses in Corfu channel, 1831; Dardanelles, Bosphorus and Black Sea, MSS by article published in the Nautical Magazine by Captain Middleton, c 1832; DONEGAL, Dick, Reporting disappearance of Graham Island, 1832; MASTIFF, Wolfe, Soundings off Albania, 1830; ST VINCENT, Elson (Master), beautifully drawn views of Naples etc, 1832; RAINBOW, Franklin, further general remarks of Mediterranean, 1831-32.

VOL 82 (C11)
Includes: BEVIDERA, Dundas, detailed directions for Cadiz and some Mediterranean ports, 1831; BRITANNIA, Ranier, Confirms that Copeland's survey of Dardanelles is correct, 1832-33; FAVOURITE, Dowers (Master), description of E Mediterranean ports with sketches and beautiful watercolour of Tripoli harbour, 1834; MADAGASCAR, Elson (Master), rocks in Naples bay, 1831; PORTLAND, Pine, directions for Piraeus with plan, 1834; RAINBOW, Franklin, General remarks on E Mediterranean, 1832-34; ROVER, Young, Remarks on Tripoli (Libya) with sketches, 1834; Government Notice on Graham shoal, 1832; Notes on the Black Sea by Captain Drinkwater, 1835.

VOL 83 (C12)
Includes: AIGLE, Lord Paget, Useful remarks in E Mediterranean, 1842; BARHAM, Corry, Description of whirlpool of Charybdis, 1839; JASEUR, White, Remarks on S Coast of Spain with some attractive water colours, 1834-35; MEDEA, Austin, remarks on Greek islands, 1837; RAPID, Fredk Evans (2nd Master), Scilly, Spain etc, with neat plan of Barcelona, 1837; RODNEY, Hyde Parker, numerous remarks with survey

of shoals off Acre and Marmorice harbour, 1835-36; SNAKE, Devereux, attractive drawing of Greek towers and castles, 1843; TALBOT, Codrington, Albania with plan showing rock on which ship grounded, 1839; Results of observations obtained between Aleppo and coast of Syria by James F Jones, Assistant Surveyor Euphrates Expedition, 1841.

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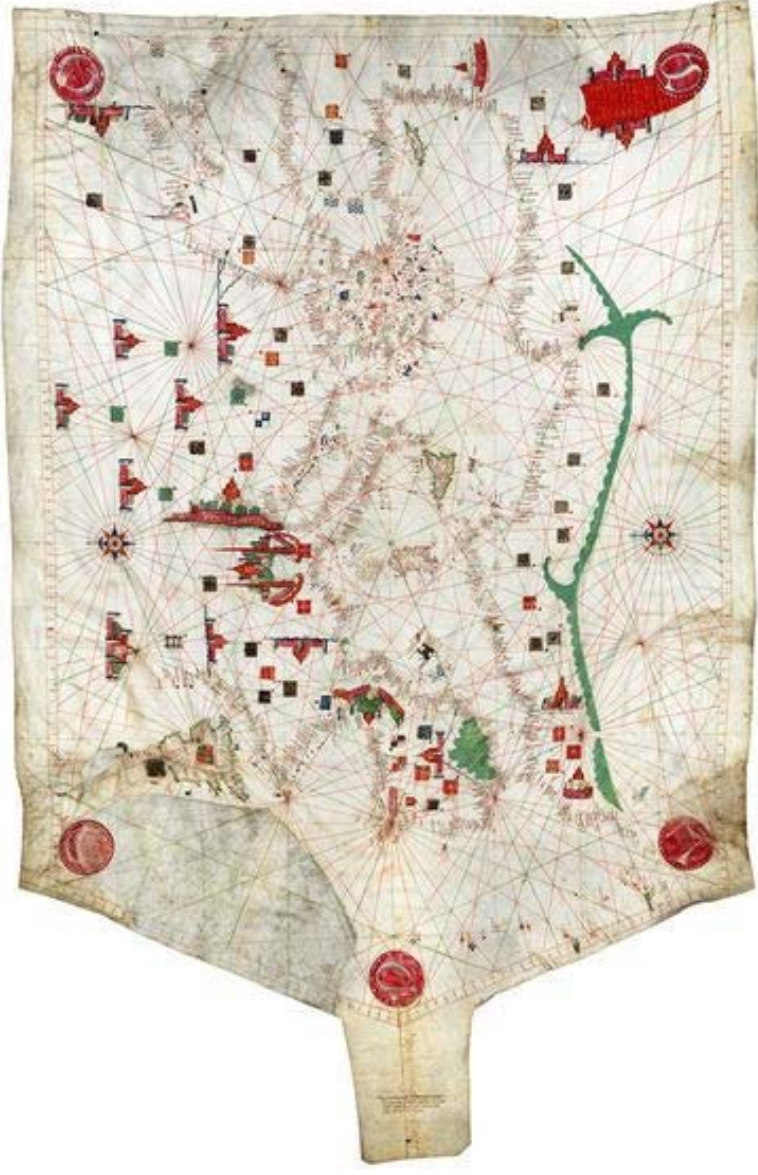
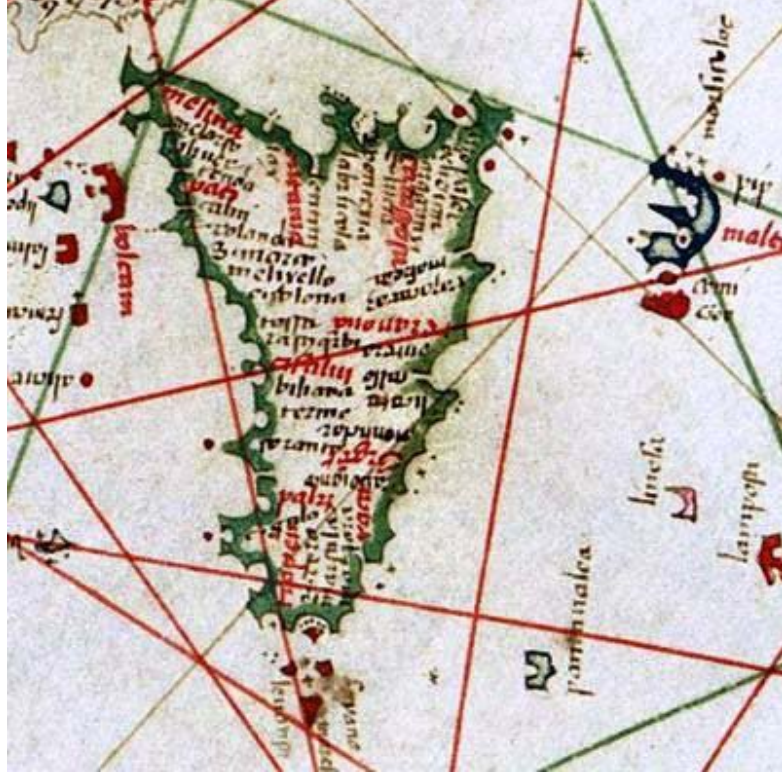
Mediterranean and NE Atlantic

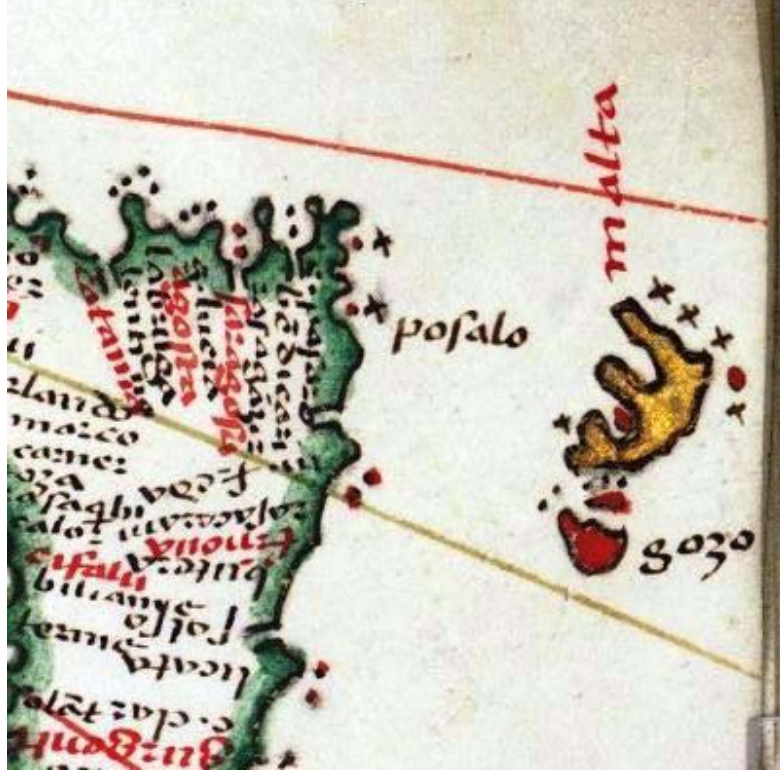
- Author: Bertran Jacopo
- Year: 1456
- Place: Barcelona
- Description: This is the oldest Portulan chart in the collection of the Greenwich Maritime Museum. Its details are typical of a portulan and it is drawn and painted on vellum, using a network of intersecting rhumb lines radiating out from compass roses. Malta and Sicily are depicted prominently in the centre of the map.

Source: Greenwich Maritime Museum

Mediterranean and NE Atlantic (detail)

Source: Greenwich **Maritime** Museum

Central Mediterranean, Italy and Sicily

- Author: Bartolommeo Sonetti
- Year: 1485
- Place: Venice
- Description: Each Island is enclosed in a windrose with eight rays and this map is dedicated to the Doge of Venice and lifted from a book about islands of the central Mediterranean. This portulan of the Adriatic and central Mediterranean depicts Malta with exaggeratedly large harbours. It also depicts the Aeolian Islands in some detail.

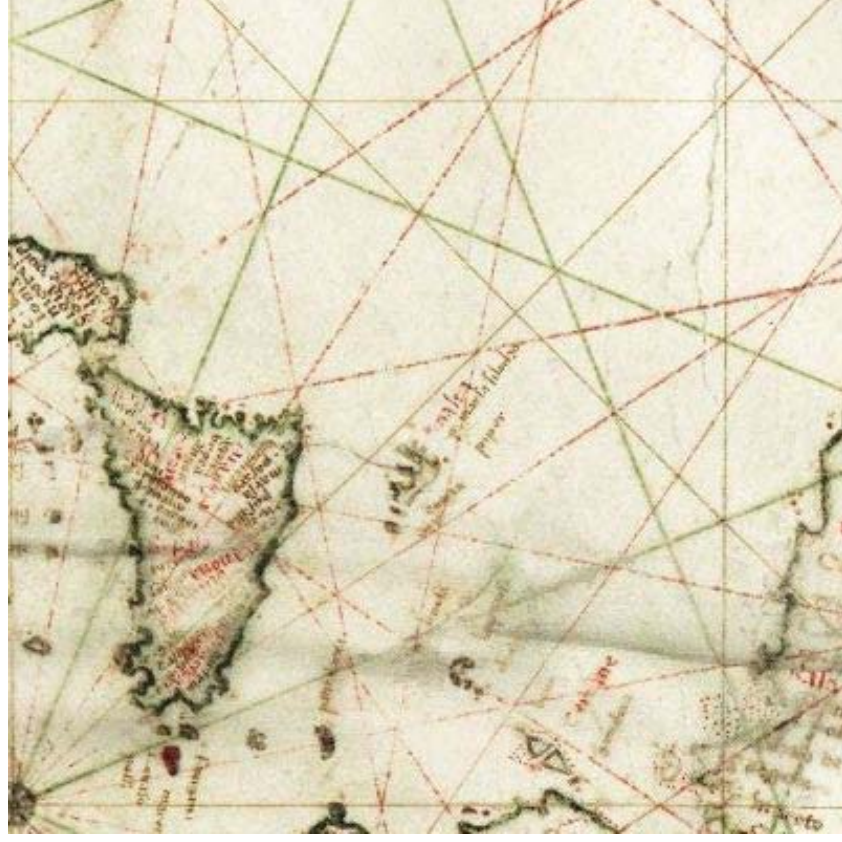
Source: Greenwich Maritime Museum

Central Mediterranean, Italy and Sicily (detail)

Source: Greenwich Maritime Museum

Mediterranean and Black Seas

- Author: Maggiolo Vesconte
- Year: 1546
- Place: Genoa
- Description: This is a portulan map that contains a prominent vignette of the city of Genoa. The Madonna, representing the religious link of seafarers, is depicted at the neck (see next slides for details). The style of this portulan is very much in line with its predecessors of the late Middle Ages.

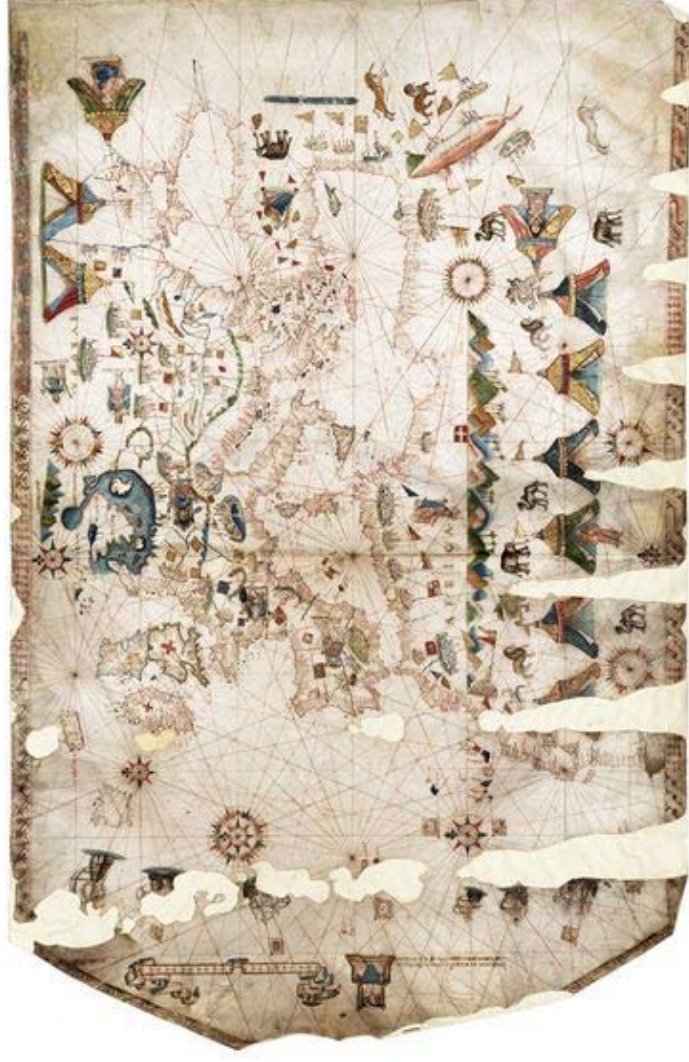
Source: Greenwich Maritime Museum

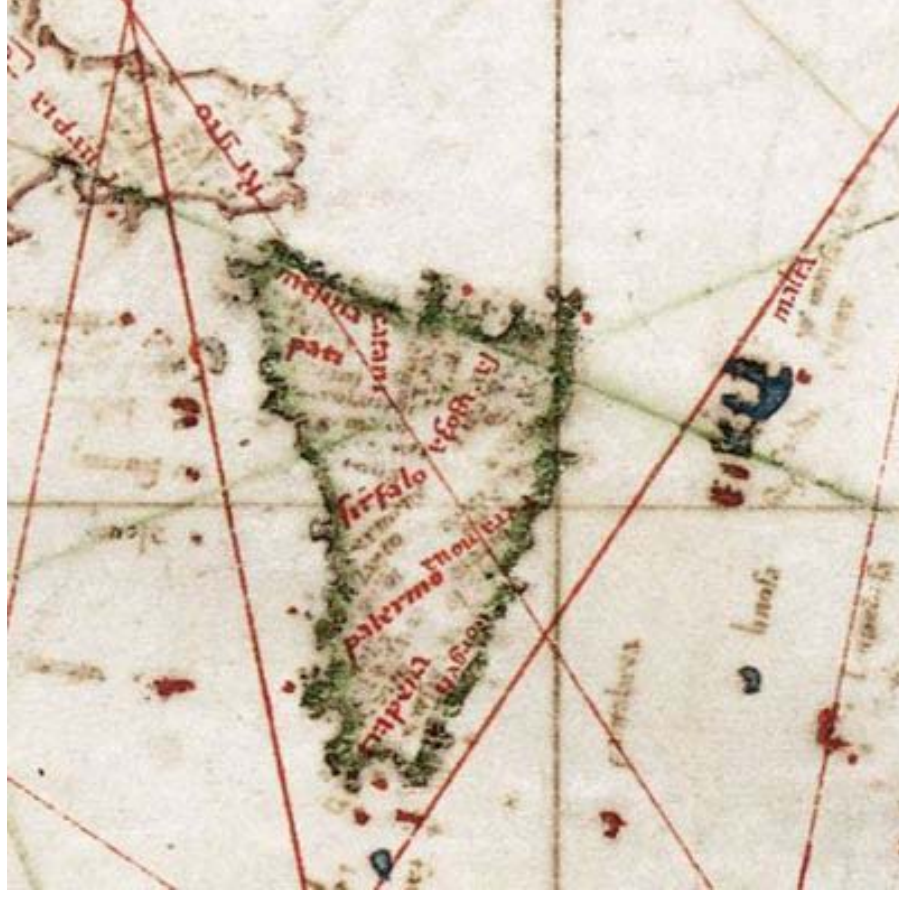
Mediterranean and Black Seas (detail)

Source: Greenwich Maritime Museum

Mediterranean and Black Seas (detail)

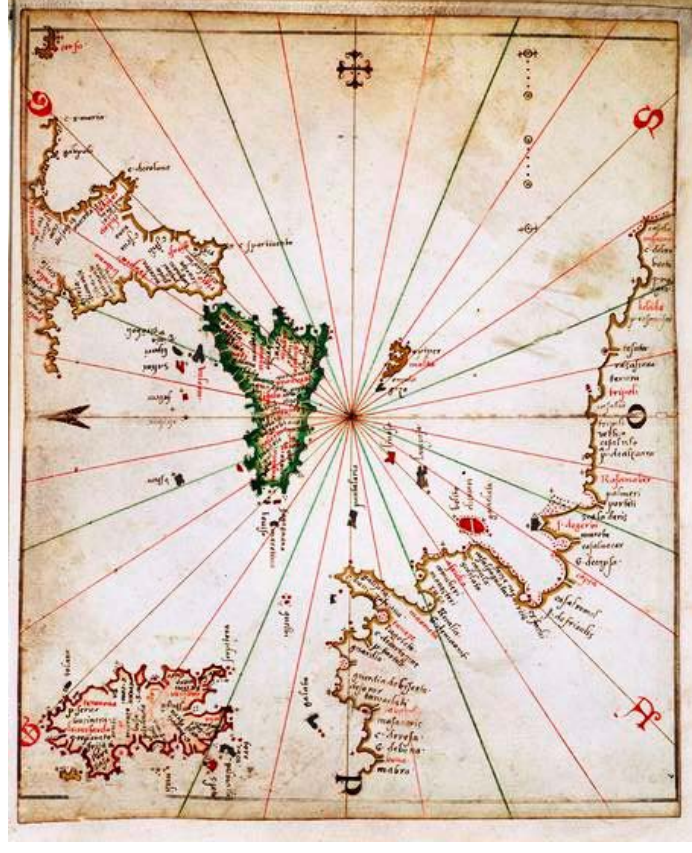
Source: Greenwich Maritime Museum

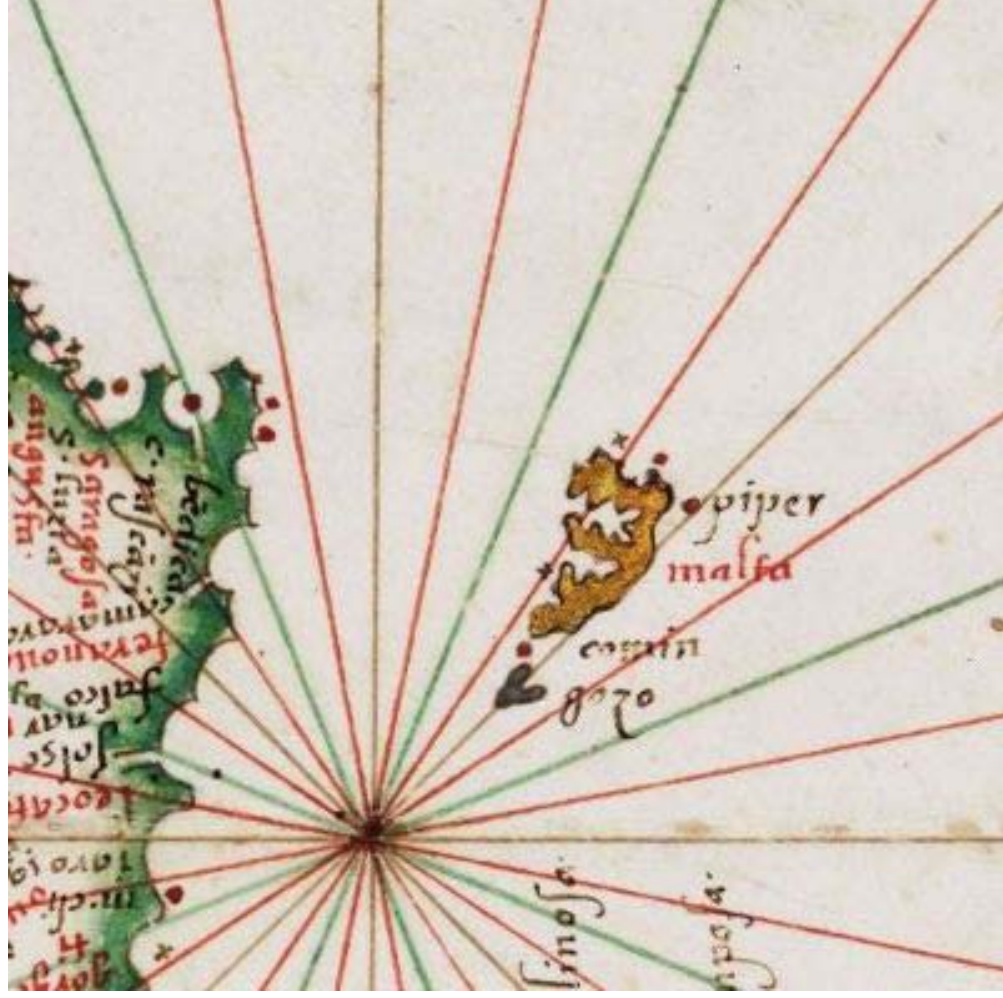
Mediterranean, Black Sea and NE Atlantic

- Author: Maggiolo Vesconte
- Year: 1548
- Place: Genoa
- Description: Maggiolo Vesconte was the senior member of a Genoese chart making family. Characteristically, it includes features such as place names tightly listed along the coast, together with flags and banners of cities. The style of this portulan is very much in line with its predecessors of the late Middle Ages.

Source: Greenwich Maritime Museum

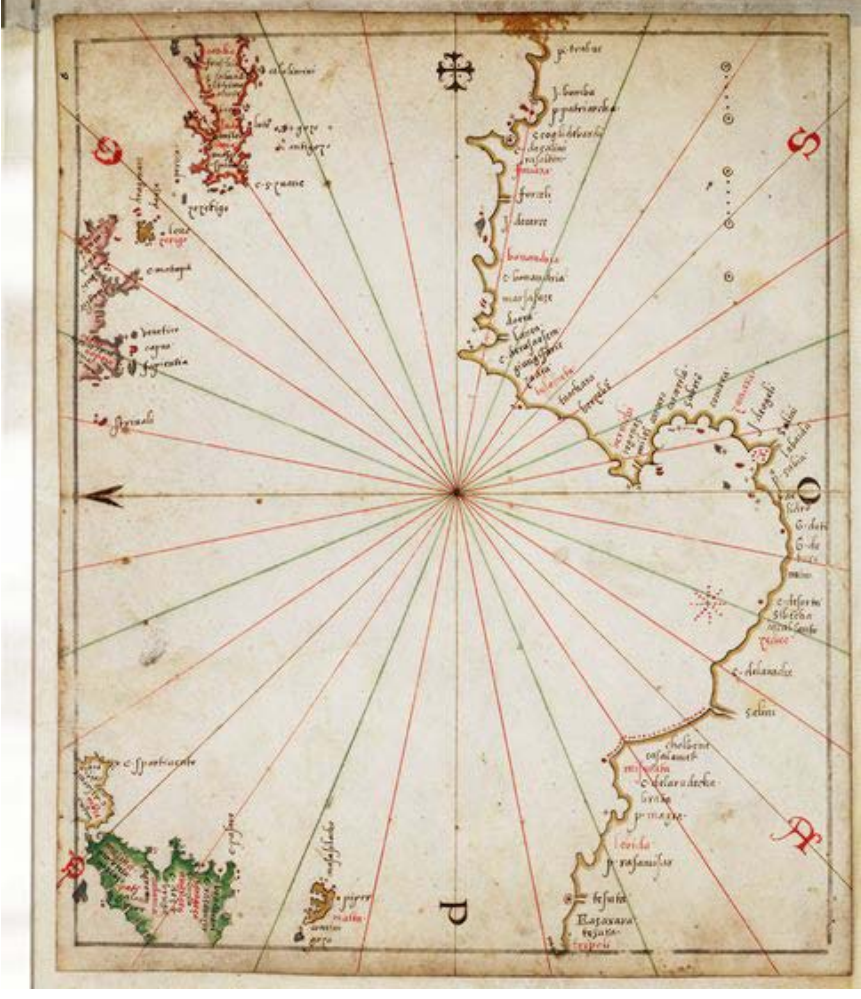
Mediterranean, Black Sea and NE Atlantic (detail)

Source: Greenwich Maritime Museum

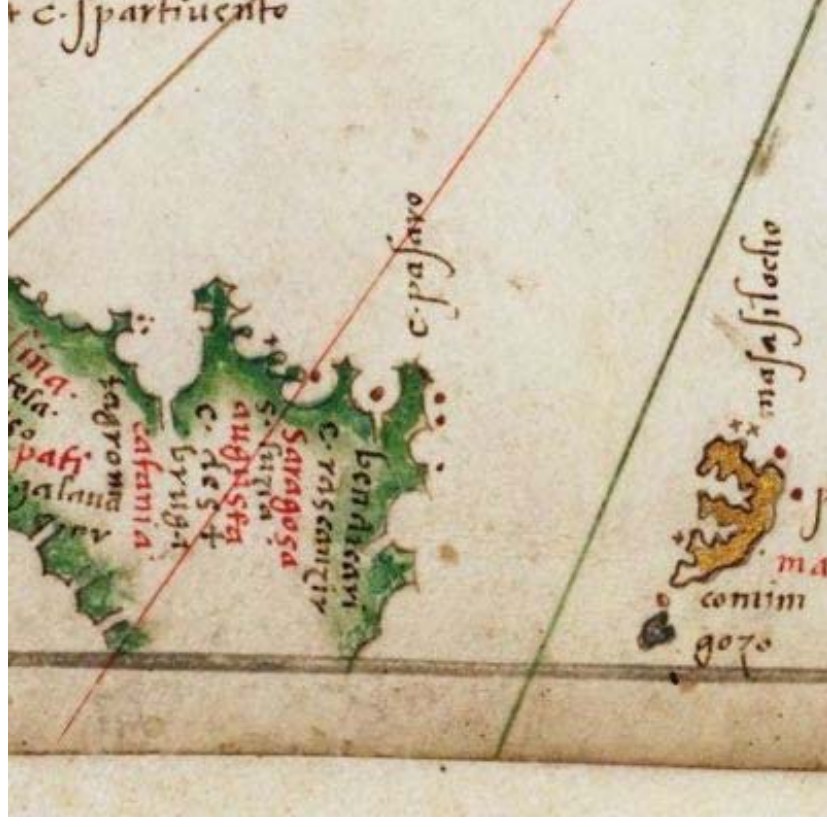
Sardinia to Sicily

- Author: Joan Martines
- Year: 1550
- Place: Unknown
- Description: Originally part of an atlas. This is one of the earliest maps dedicated to the central Mediterranean.

Source: Greenwich Maritime Museum

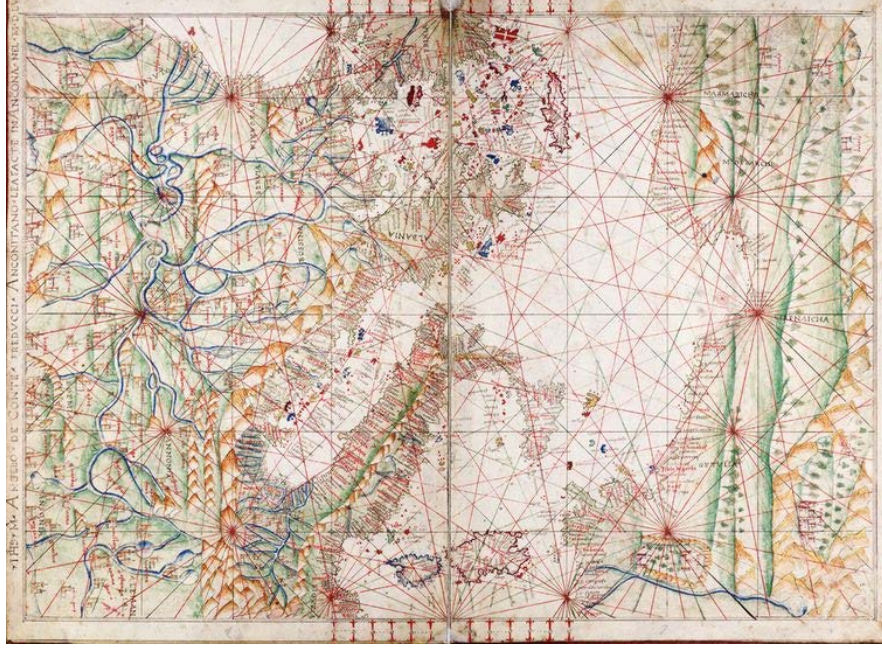
Sardinia to Sicily (detail)

Source: Greenwich Maritime Museum

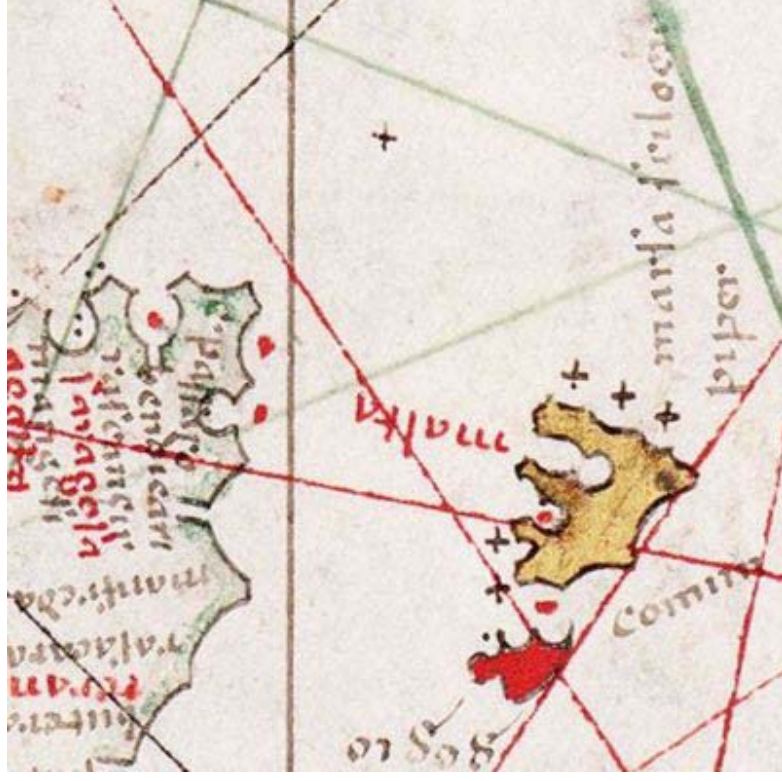
Sicily to Crete with Libya

- Author: Joan Martines
- Year: 1550
- Place: Unknown
- Description: Originally part of an atlas. This is a map of the central Mediterranean. Of interest is the fact that only the harbour of Marsaxlokk is listed by name on Malta – this being the first harbour available to vessels approaching from the east. On the eastern coast of Sicily, a number of headlands are given prominence over other features.
- This portulan differs from its contemporaries in that it does not give any prominence to flags and other heraldic features. In this way it represents an important transition to a more utilitarian chart.

Source: Greenwich Maritime Museum

Sicily to Crete with Libya (detail)

Source: Greenwich Maritime Museum

Central Mediterranean

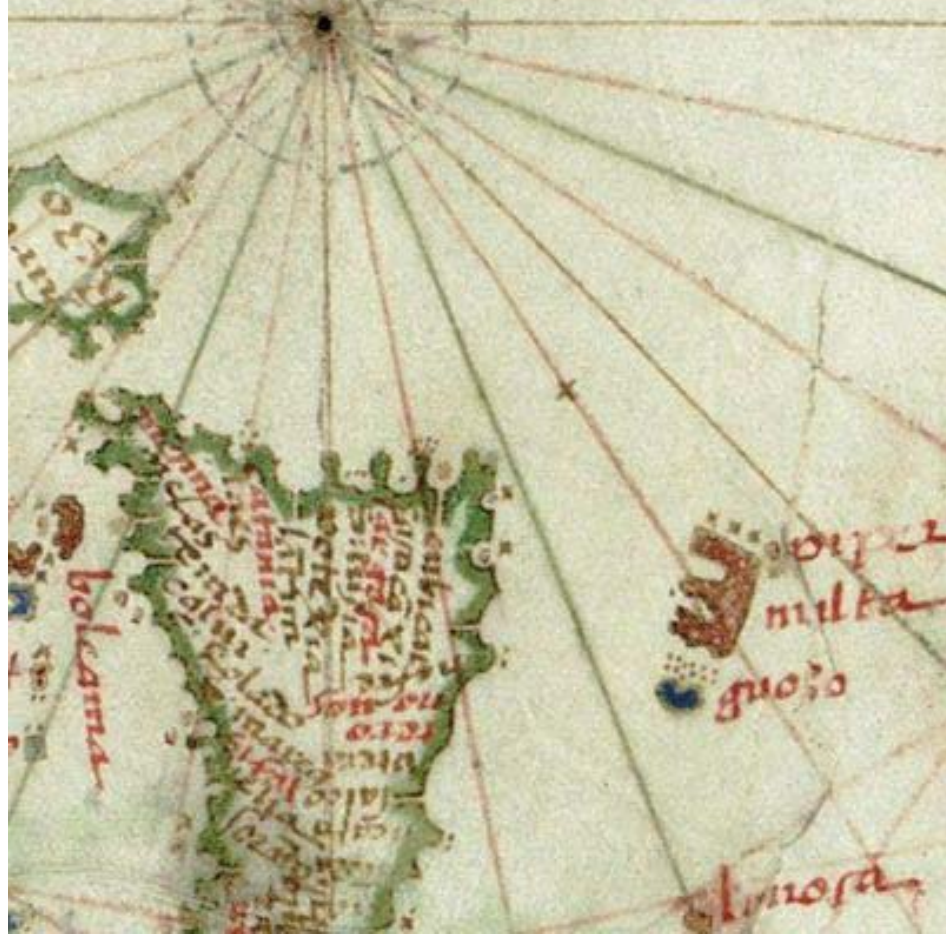
- Author: Angelo de Conte Freducci
- Year: 1555
- Place: Ancona
- Description: This map is bound in an atlas of nine charts and includes rhumb lines. It also shows terrestrial relief and rivers. This portulan is rather distinct as it illustrates the interior of Europe in unusual detail.

Source: Greenwich Maritime Museum

Central Mediterranean (detail)

Source: Greenwich Maritime Museum

Mediterranean and NE Atlantic

- Author: Sebastiao Lopes
- Year: 1555
- Place: Portugal (?)
- Description: This map is attributed to Lopes, a Portuguese cartographer. The attribution is made on its stylistic grounds. It is decorated with flags, heraldic shields and compass roses.

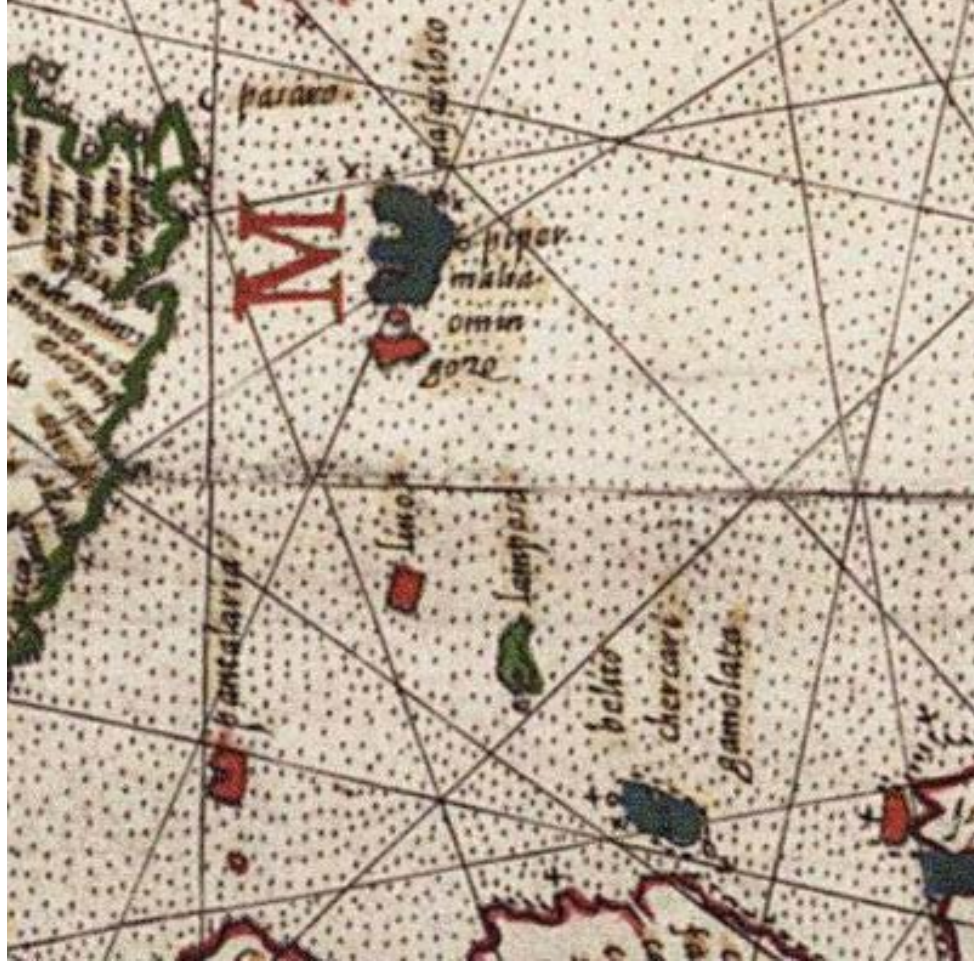
Source: Greenwich Maritime Museum

Mediterranean and NE Atlantic (detail)

Source: Greenwich Maritime Museum

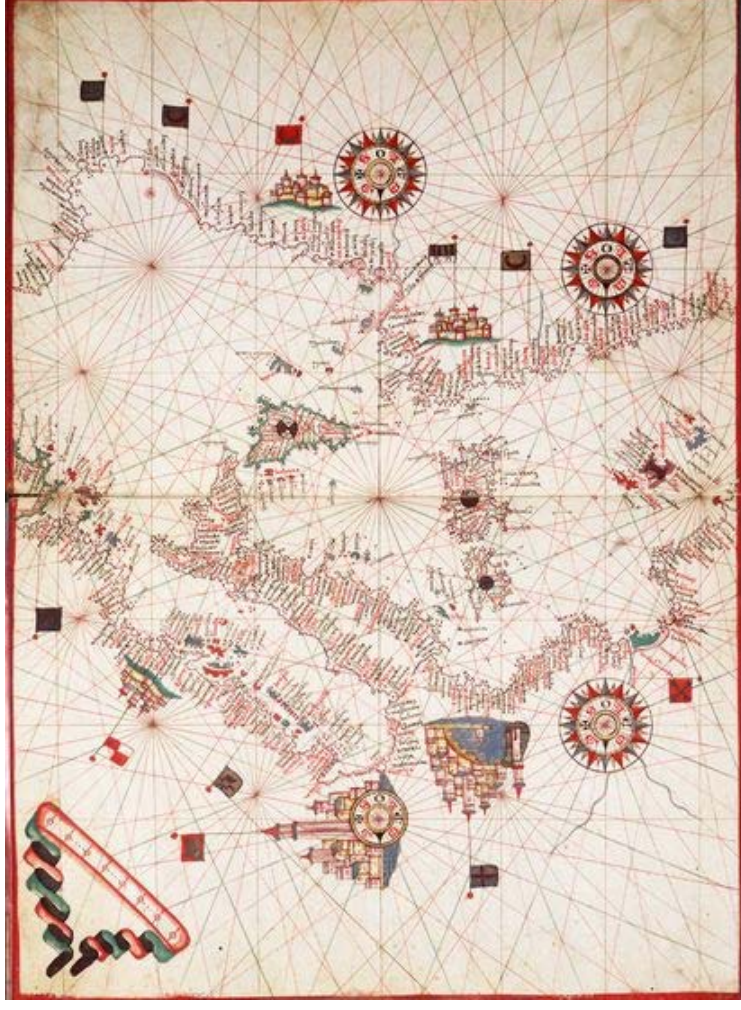
Mediterranean and NE Atlantic

- Author: Paulo Forlani
- Year: 1569
- Place: Venice
- Description: A Map of the Mediterranean, including North Western Europe. This is an early example of a chart on a scale large enough to be useful at sea. It is also the first to be printed by the copper-engraving process

Source: Greenwich Maritime Museum

Mediterranean and NE Atlantic (detail)

Source: Greenwich Maritime Museum

Central Mediterranean

- Author: Joan Martines
- Year: 1572
- Place: Messina
- Description: Quite an unusual map of the Mediterranean. Includes latitude and distance scales as well as windroses.
- Once again, the size of Malta's harbours are exaggerated to emphasise their importance.

Source: Greenwich Maritime Museum

Central Mediterranean (details)

Source: Greenwich Maritime Museum

Sicily

- Author: Willem Barentsz
- Year: 1594
- Place: Amsterdam
- Description: Little is known about Willem Barentsz of Amsterdam, except that he was a seasoned navigator and explorer. His hydrographic charts, drawn up in 1595, owed inspiration to those of an earlier work by Lucas Waghenaer, a dutch navigator who published his own charts in his *Spieghel der Zeevaerdt*, in 1584. This collection of maps, which did not include references to the Mediterranean, were to be amongst the first published charts to replace the less-accurate Medieval drawings. Barentsz's volume only contains 10 maps that range from Spain to Italy. This map of Sicily is drawn by Pieter van den Keere, and features four views of ports. All maps in Barentsz's volume are preceded by a short description of the characteristics of the ports, the distance separating them and the main promontories on the coast. One can also find detailed references to small islands and some coastal tracts.

Source : Liliane Dufour and Antonio La Gumina, *Imago Siciliae* (Catania 2007), 96, 292.

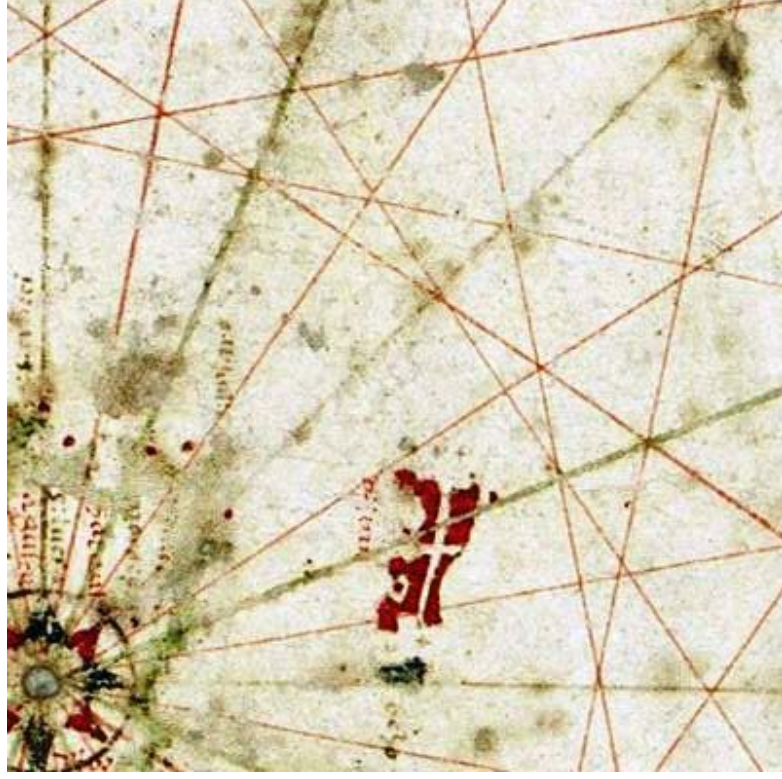
Sicily (detail)

Source : Liliane Dufour and Antonio La Gumina, *Imago Siciliae* (Catania 2007), 96, 292.

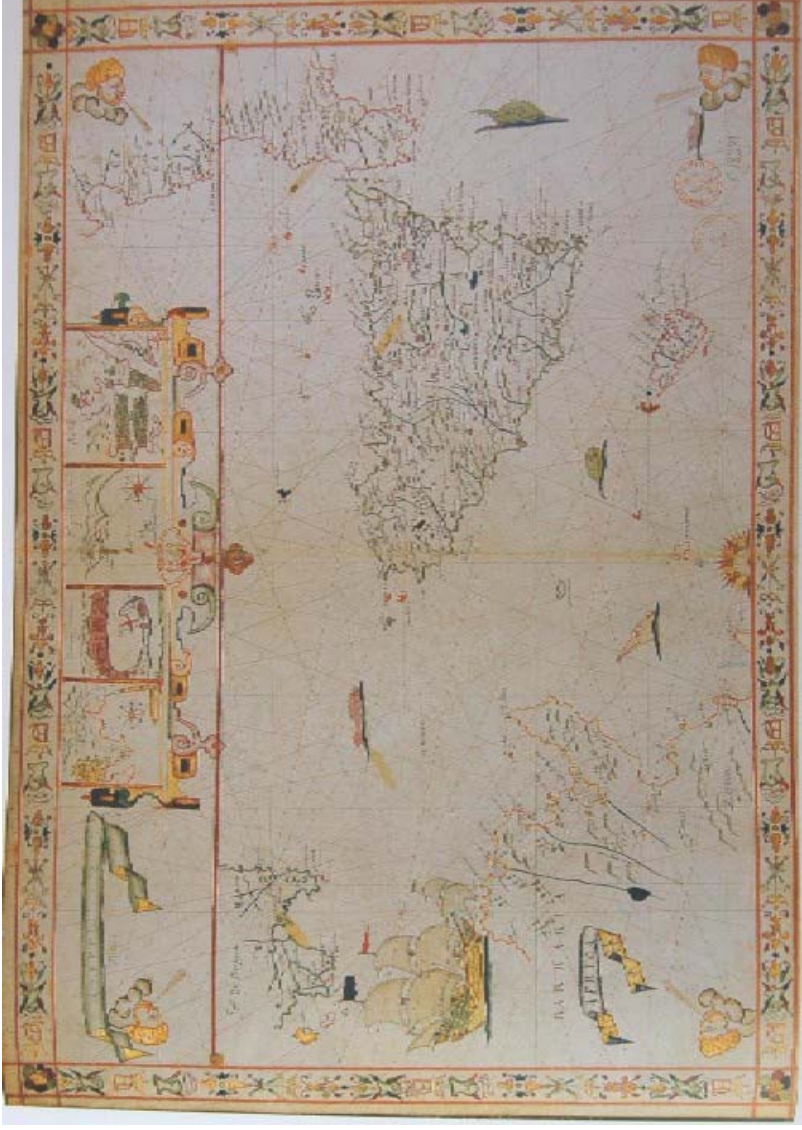
Mediterranean, Black and Caspian Seas

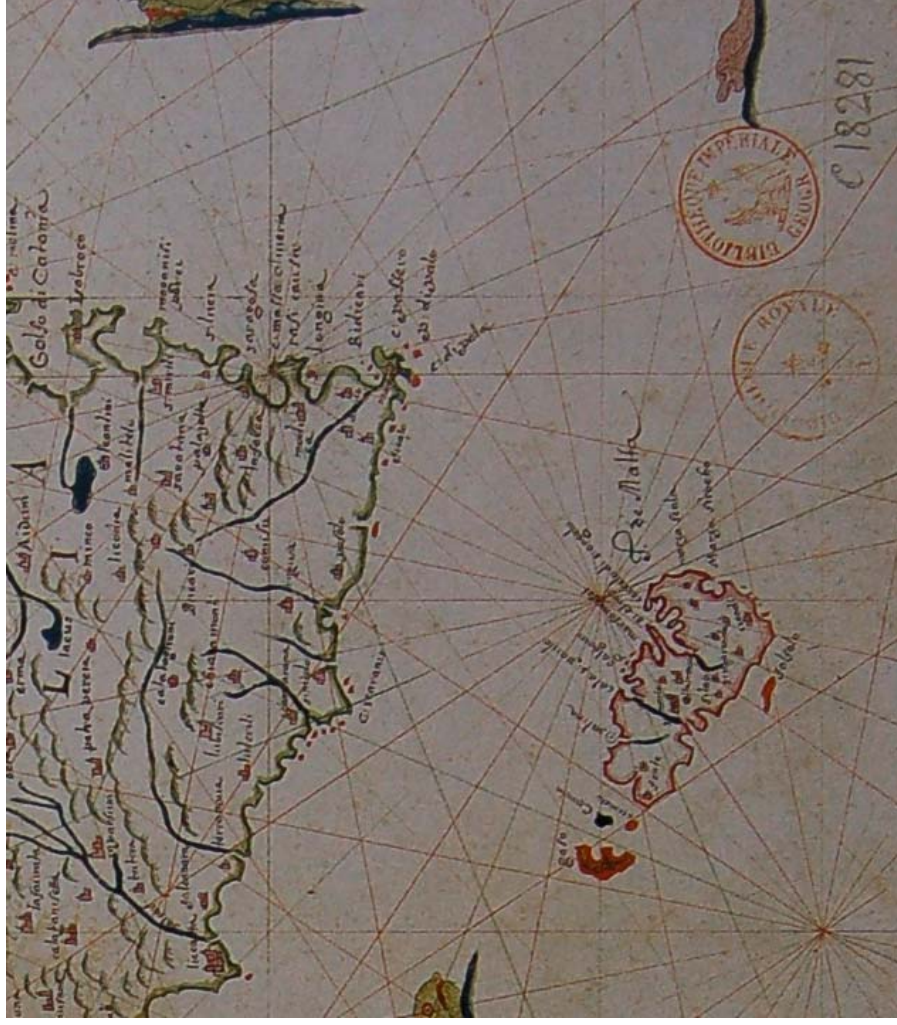
- Author: Francisco Oliva
- Year 1609 (?)
- Place: Messina
- Description: The Olivas were a large Catalan family of portulan chart makers who worked in many European port cities in the sixteenth and seventeenth centuries. This map includes distances scales but no latitude graduation.
- Malta is depicted in the colours of the flag of the Order of St John.

Source: Greenwich Maritime Museum

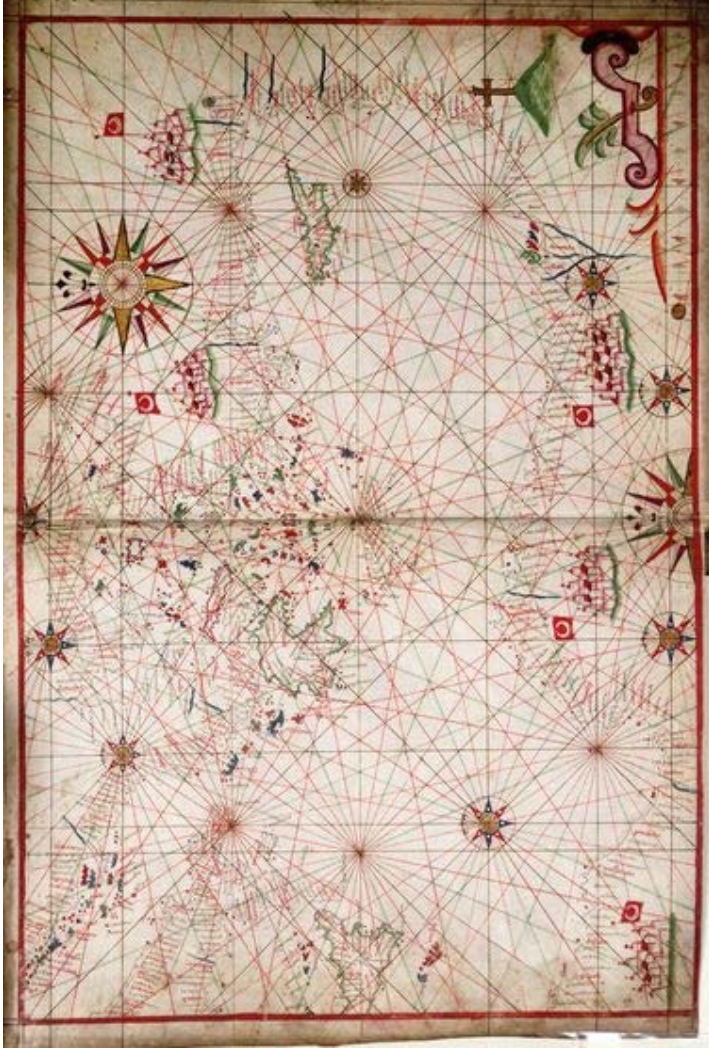
Mediterranean, Black and Caspian Seas (detail)

Source: Greenwich Maritime Museum

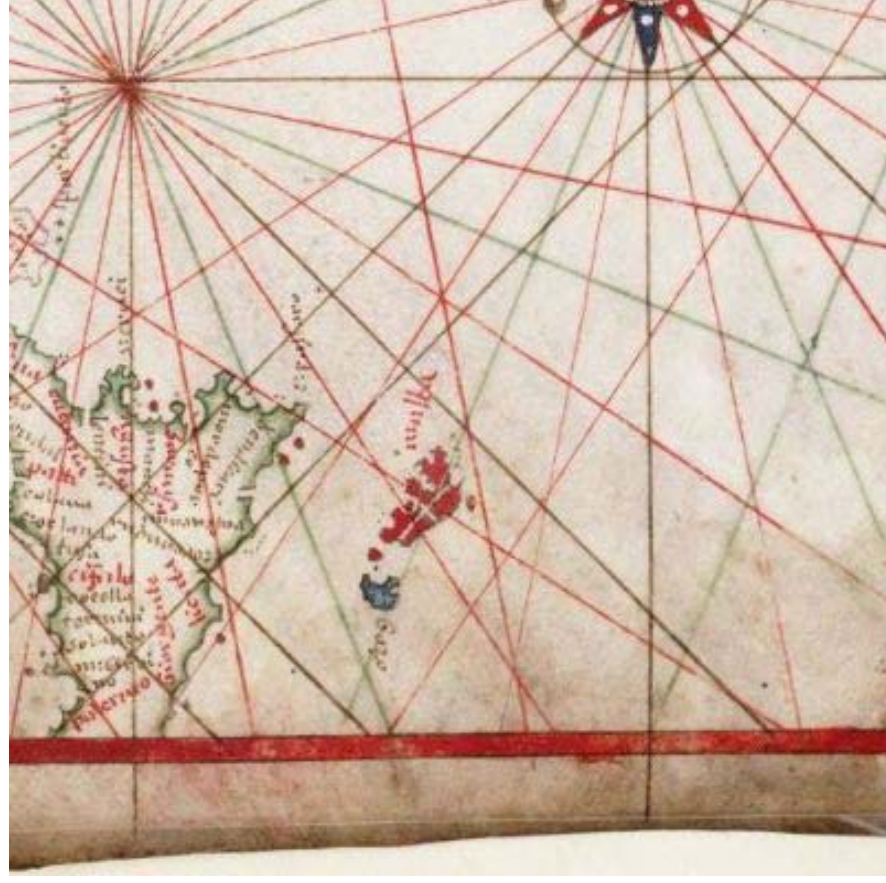
Central Mediterranean

- Author: Charlat Ambrosin
- Year: 1620
- Place: Marseille
- Description: A cartographic work by Charlat Ambrosin. This atlas illustrates the development of French cartography after the decline of the Catalan School. The part dedicated to Sicily is not very original as it seems to be a copy of the map designed by Pieter van den Keere for the atlas of W. Barentsz. Ambrosin re-uses frameworks including the scale as well as details of the views of the ports of Palermo, Messina, Trapani and Malta. Ambrosin corrected the orientation of the island so as to be more in line with the cartography of the time.

Source : Liliane Dufour and Antonio La Gumina, *Imago Siciliae* (Catania 2007), 111, 294.

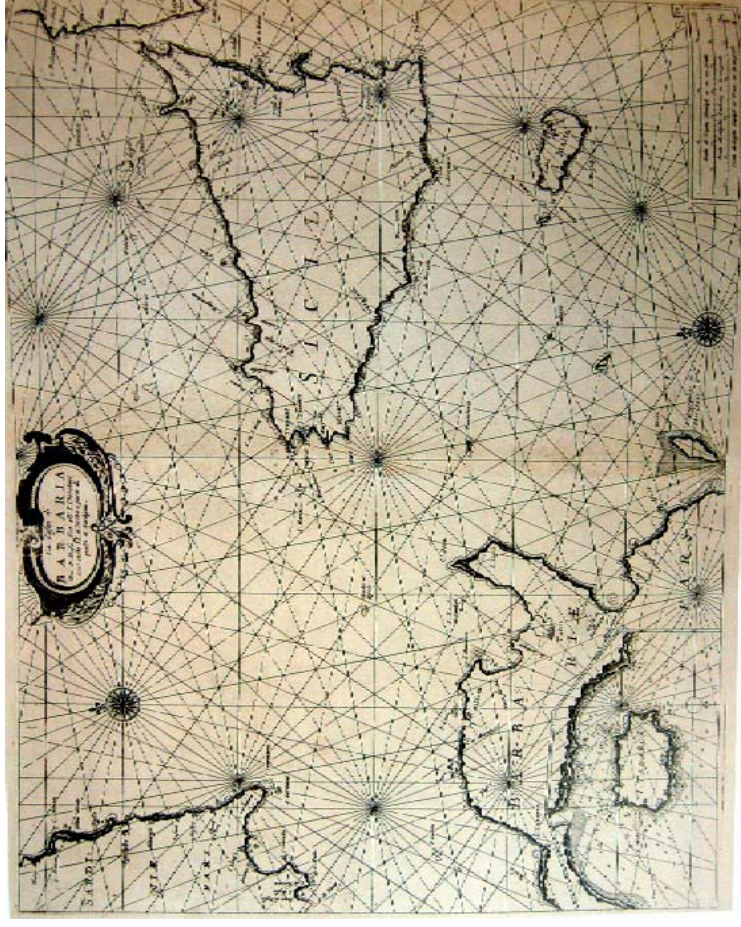
Central Mediterranean (detail)

Source : Liliane Dufour and Antonio La Gumina, *Imago Siciliae* (Catania 2007), 111, 294.

Eastern Mediterranean

- Author: Joan Oliva
- Year: 1632
- Place: Livorno
- Description: This map is bound in an atlas of six charts, two by Sanches and four by Oliva. It charts Malta as part of the eastern Mediterranean and is a late example of the medieval style/format of the portulan.

Source: Greenwich Maritime Museum

Eastern Mediterranean (detail)

Source: Greenwich Maritime Museum

Central Mediterranean

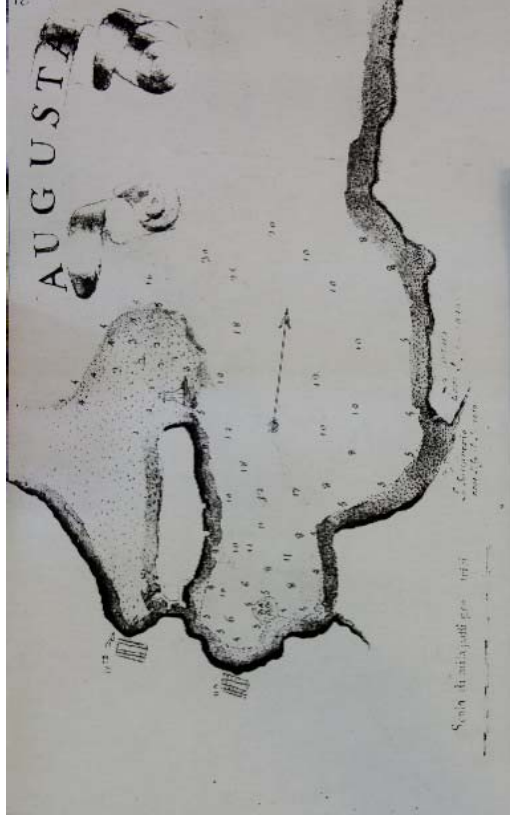
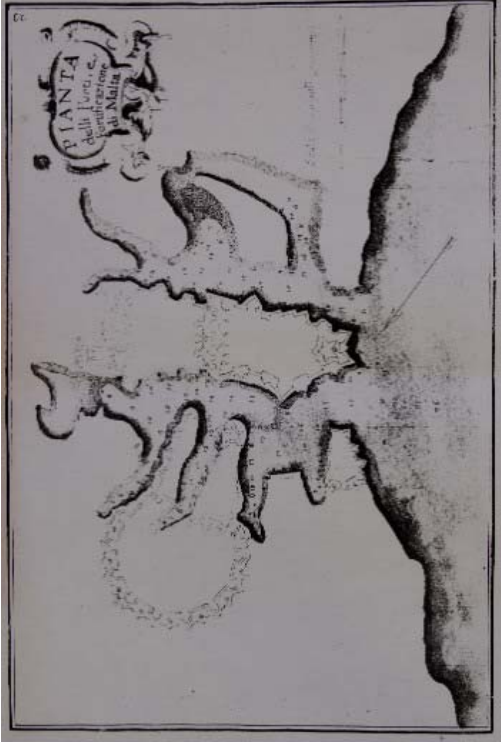
- Author: Francesco Maria Levanto
- Year : 1664
- Place: Genoa
- Description: Francesco Maria Levanto, a cartographer and a map merchant, owed inspiration to Dutch cartography when publishing his *Specchio del Mare* and his work is mainly copied off Anthoni Jacobsz (published in 1656), from which he copies the whole design and place names of Sicily. As a hydrographical chart, it features information regarding the direction of the winds and sea routes within the region, accompanied by a brief text containing a description of the Sicilian coast. Additionally, in the chapter dedicated to Sicily, there is number of maps of the ports of Messina, Palermo, Trapani and Agrigento, in which the distance between the same ports is indicated.

Source: Dr. A.Ganado Private Collection

Central Mediterranean

- Authors: Johannes van Keulen and Gerard van Keulen
- Year: 1682
- Place: Amsterdam
- Scale: 60 'Italian Miles'
- Description: Johannes van Keulen, whose family had moved to Amsterdam, was a member of the guild of book merchants. In 1680, he published a maritime atlas entitled *De Groote Nieuwe Vemeerderde Zee Atlas,* which was published in many editions. This map of Sicily is not very original and mostly limits itself to reproducing an earlier chart by Anthoni Jacobsz which had been published in 1656. The only exception being the substitution of the view of Tabarca with that of Valletta at the base of the map. The author of this map failed to correct the errors found in the place names of the original source and actually added even more of these. Nevertheless, the map obtained a notable amount of success and was republished many times during the seventeenth century.

Source: Liliane Dufour and Antonio La Gumina, *Imago Siciliae* (Catania 2007), 147, 300.

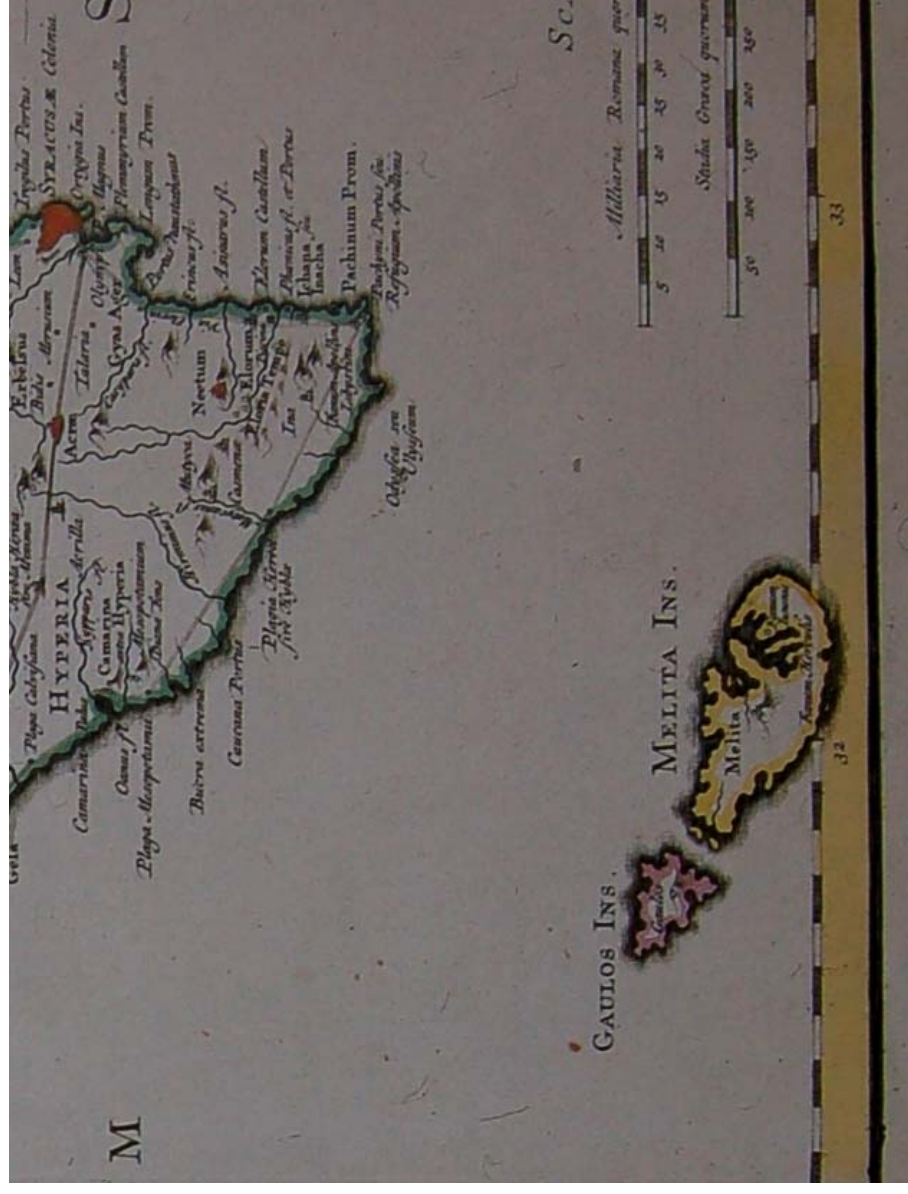
Ports in Malta and Sicily

- Author: Girolamo Agostino
- Year 1728
- Place: Palermo
- Description: This early 18th century document contains a number of charts from around the Mediterranean. It was compiled by a pilot who served on board the galleys of the Order of St John. The publication consists of charts of major harbours and anchorages from around the Mediterranean. This slide shows two maps from the document, those of Augusta and Malta.

Source: National Library of Malta, Valletta

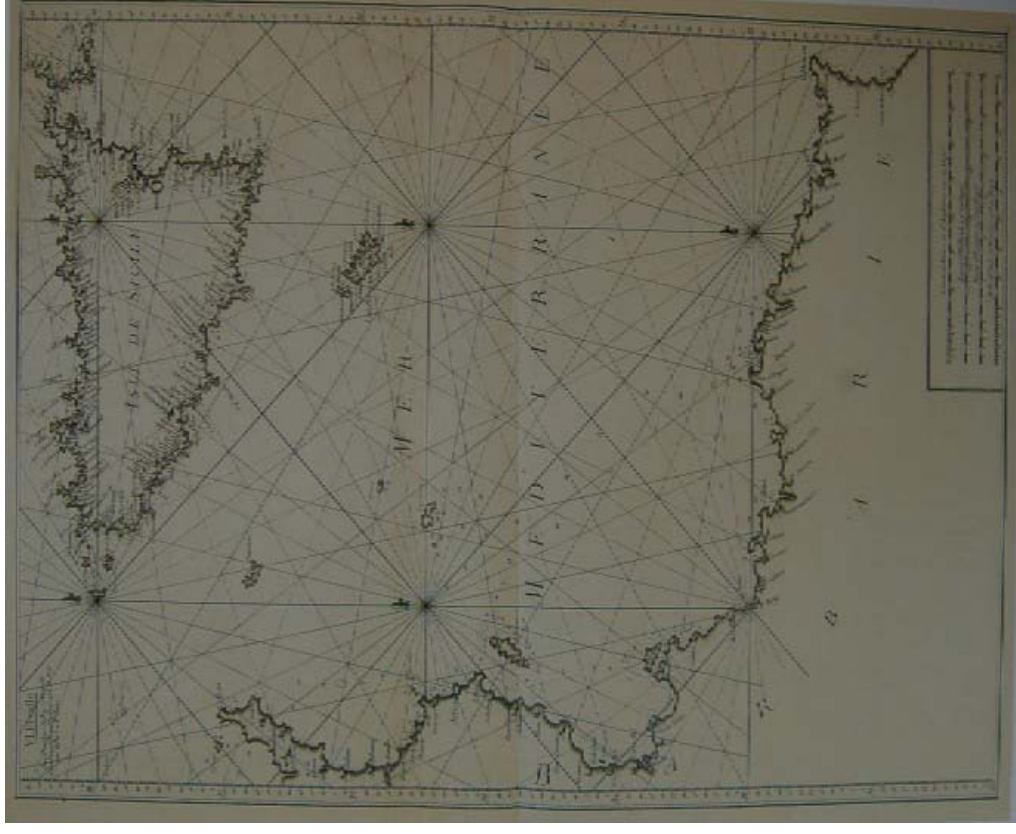
Sicily

- Author: Guillaume Delisle
- Year: c.1730
- Place: Paris
- Description: This map is a republication by Cornelis Mortier of a chart by Guillaume Delisle. It has a number of scales depicted in the bottom right hand corner. In the top left hand side of the map there is a detail of Syracuse harbour. Besides Malta, all other islands around Sicily are included.

Source: Dr. A. Ganado Private Collection

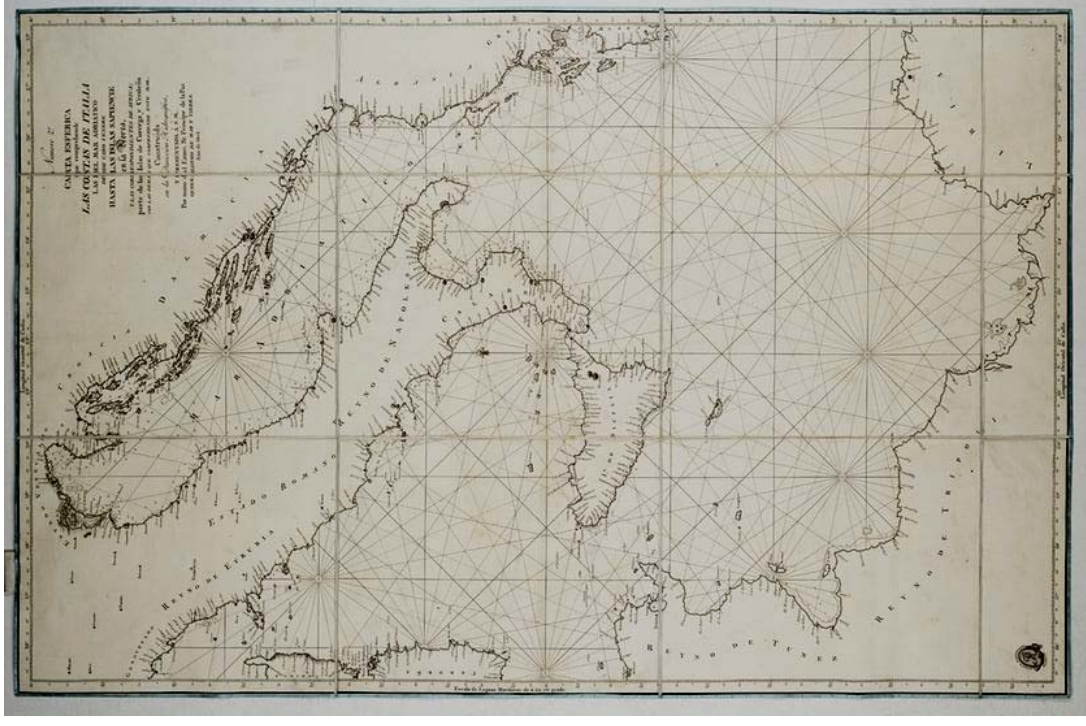
Sicily (detail)

Source: Dr. A. Ganado Private Collection

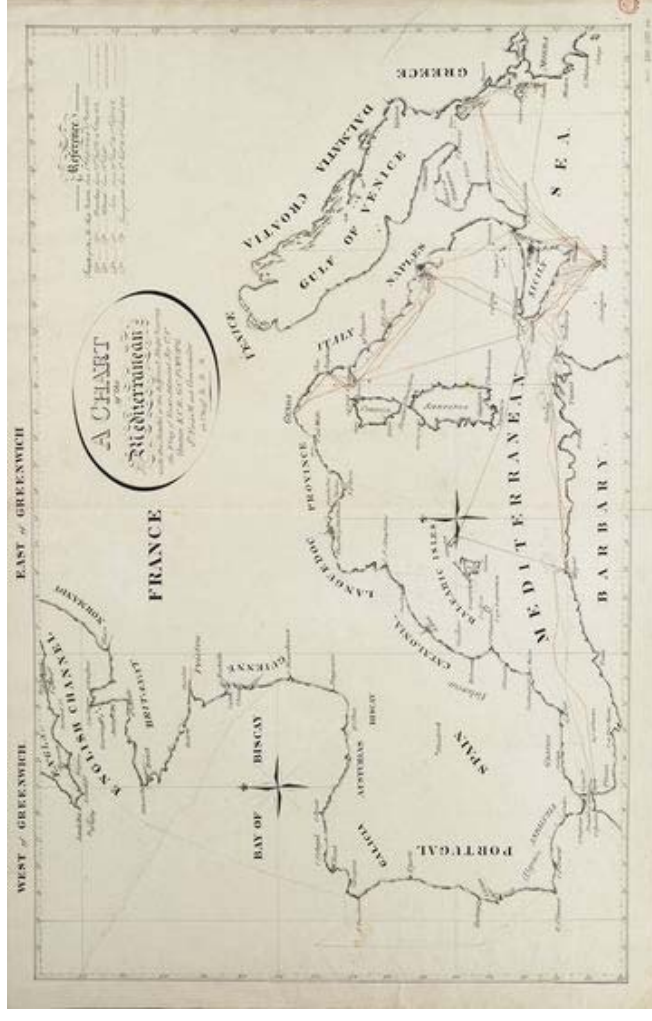
Central Mediterranean

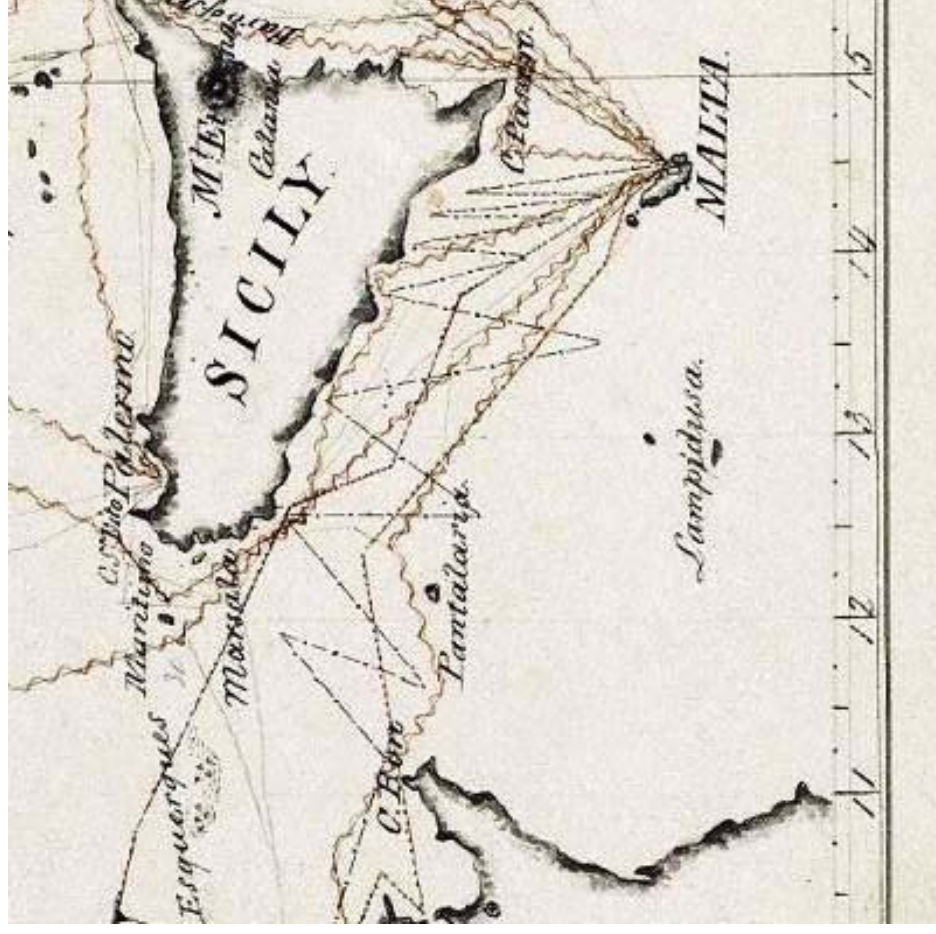
- Author: Joseph Roux
- Year 1764
- Place: Marseille
- Description: This map is from an atlas consisting of twelve large plates published in 1764 by Joseph Roux. The reproduction of Sicily does not present any noteworthy progress in respect to previous nautical maps designed by Van Keulen and the place names, translated from French, are scarce. It was also published as an English version by Mount and Page, with the title *The Coast of the Mediterranean Sea from Cap Bon to Cape Mesurato, including the islands of Sicily and Malta*. This chart is an excellent representation of eighteenth century maritime cartography which had moved away from earlier elaborate maps.

Source: Liliane Dufour and Antonio La Gumina, *Imago Siciliae* (Catania 2007), 220, 311-2.

Central Mediterranean

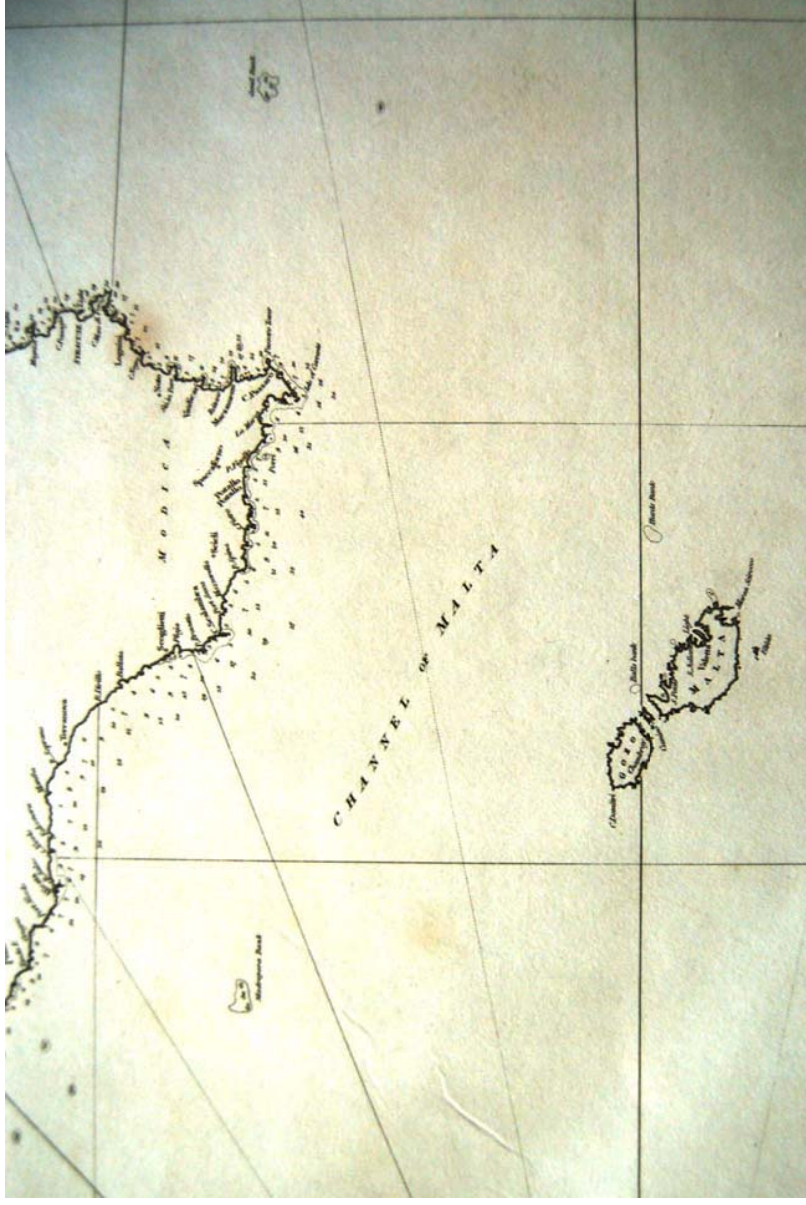
- Author: Deposito Hidrografico
- Year: 1802
- Place: Madrid
- Description: A very detailed map depicting the central Mediterranean showing the Italian Peninsula. This is one of the latest versions of this type of chart which is devoid of any soundings of the seabed. Its orientation is very similar to that of modern charts still in use today.

Source: Greenwich Maritime Museum

Western Mediterranean

- Author: Anonymous
- Year: 1820
- Place: London (?)
- Description: A map depicting the western Mediterranean showing the tracks of the various ships of Rear Admiral Sir C.V.

Source: Greenwich Maritime Museum

Western Mediterranean (Detail)

Source: Greenwich Maritime Museum

Central Mediterranean

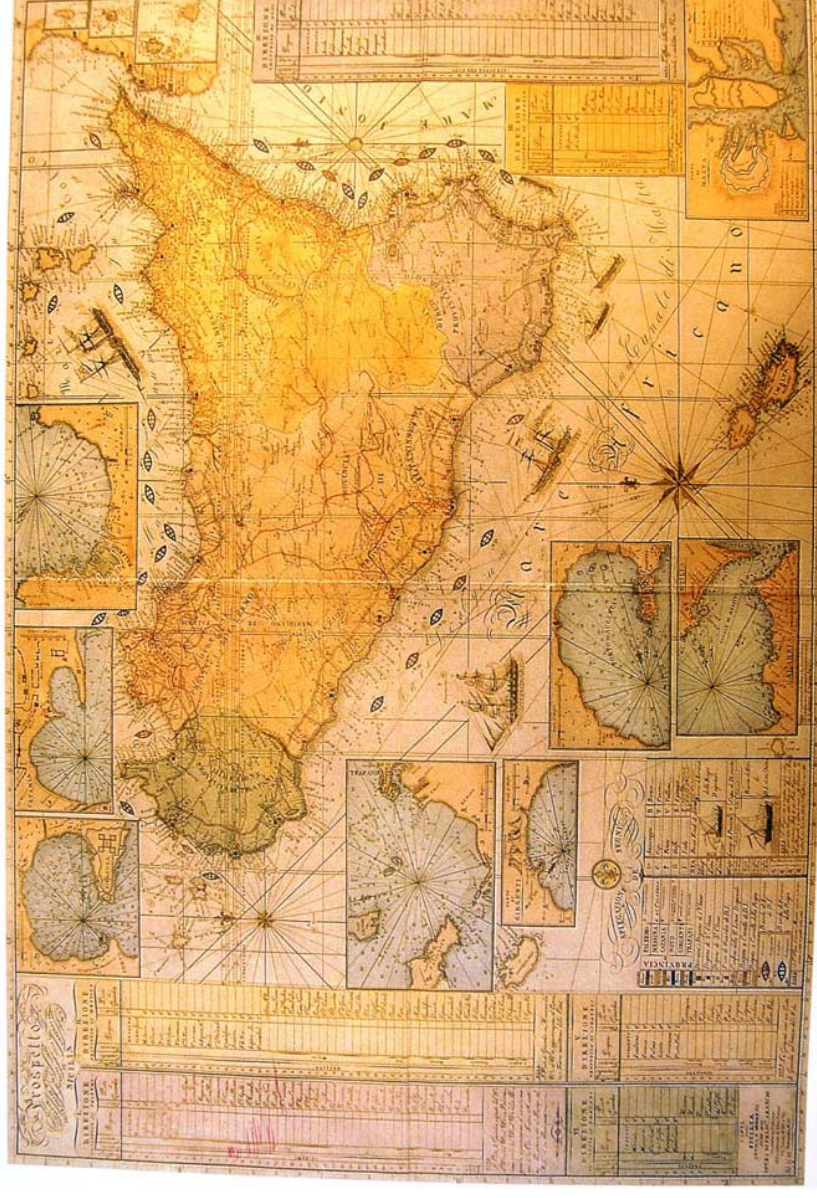
- Author: A.W. Smyth
- Year: 1823
- Place: London
- Description: A detail from Smyth’s map of the central Mediterranean as published in his seminal work entitled *The Hydrography of Sicily and its Islands*. Smyth refers to the area of study as the Channel of Malta and limited soundings are depicted around the south eastern coast of Sicily.

Source: Wignacourt Museum, Rabat, Malta (detail from the larger map)

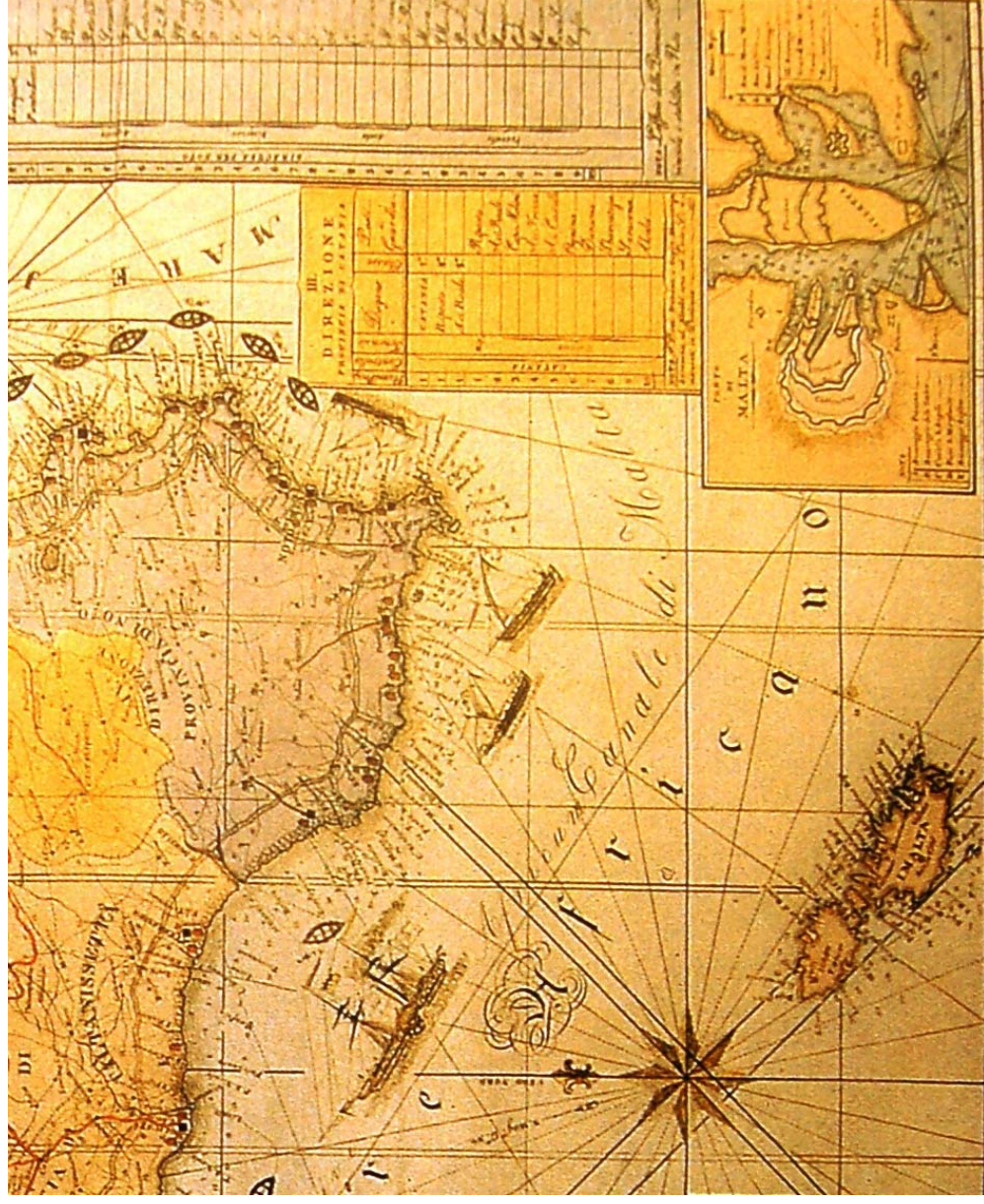
Sicily and Malta

- Author: Attilio Zuccagni Orlandini
- Year: 1842
- Place: Florence
- Description: The imposing work by Zuccagni Orlandini was published before the unification of Italy. It was designed by P. Manzoni and engraved by G. Maina and V. Stanghi. The plates, in large format, do not offer a new cartography of Sicily as they are inspired by older maps. Of interest is the attempt to illustrate the underwater shelves surrounding the islands contained within the map.

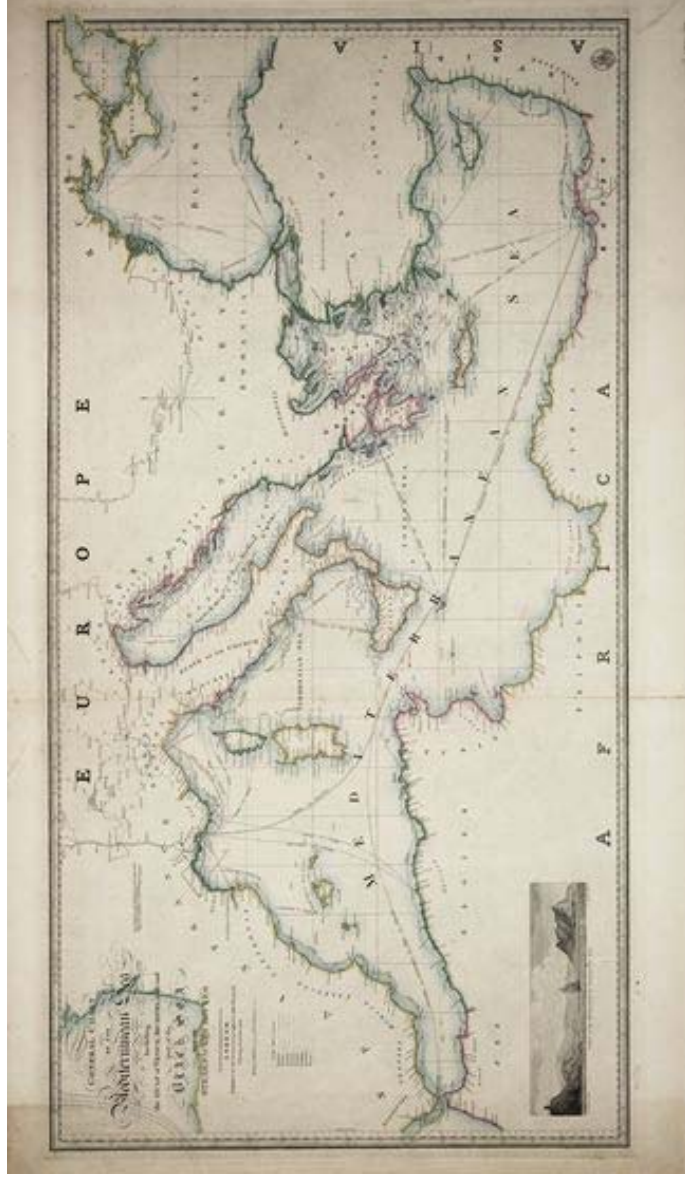
Source: Dr. A.Ganado, Private Collection

Sicily and Malta

- Author: Francesco Arancio
- Year : 1845
- Place: Palermo
- Description: This map by Francesco Arancio, which had originally been published some years earlier. It was re-edited in 1847 with a new title, possibly to attract users who were not exclusively interested in issues regarding custom offices and duties. The title, which had been previously positioned in the middle of Sicily, was moved to the bottom-left corner of the map, making the chart more legible and the sea routes easier to identify. The new edition of the map was aimed at a vaster audience, pointing out the position of monuments, ancient cities and mineral basins.

Source: Liliane Dufour and Antonio La Gumina, *Imago Siciliae* (Catania 2007), 270, 319.

Sicily and Malta (detail)

Source: Liliane Dufour and Antonio La Gumina, *Imago Sicilae* (Catania 2007), 270, 319.

Mediterranean

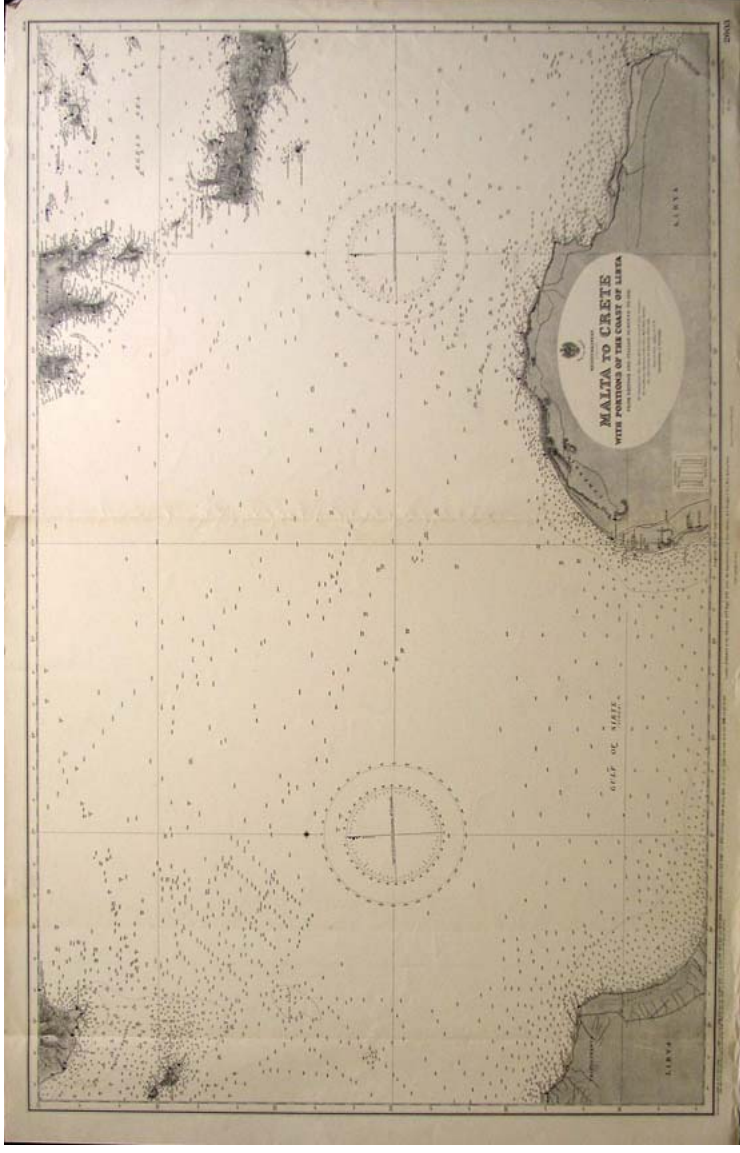
- Author: James Wyld
- Year: 1846
- Place: London
- Description: General chart of the Mediterranean Sea including the Gulf of Venice and the western part of the Black Sea. The importance of this map lies in the fact that it illustrates the steampacket routes. These were vessels that carried both passengers and goods between various ports of call. This Map outlines political boundaries as well as railways that were both constructed and under construction. The Map also includes a view of Gibraltar.

Source: Greenwich Maritime Museum

Mediterranean

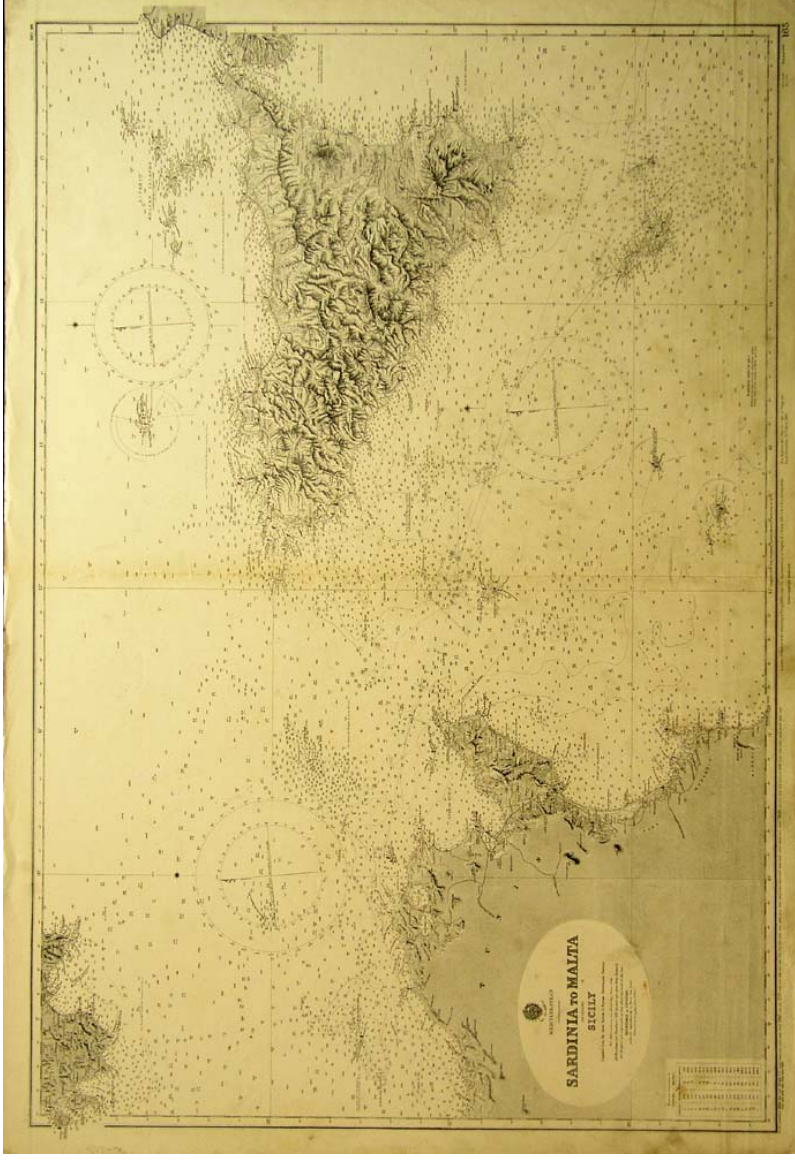
- Author: J. Rapkin
- Year: 1851 Rapkin
- Place: London
- Description: This map is divided into two and provides the principal routes from Britain to India. The Mediterranean is charted as part of this route and the Malta-Sicily channel is central to this route. The upper part consists of the map of the Mediterranean with Britain at the far left of the chart.

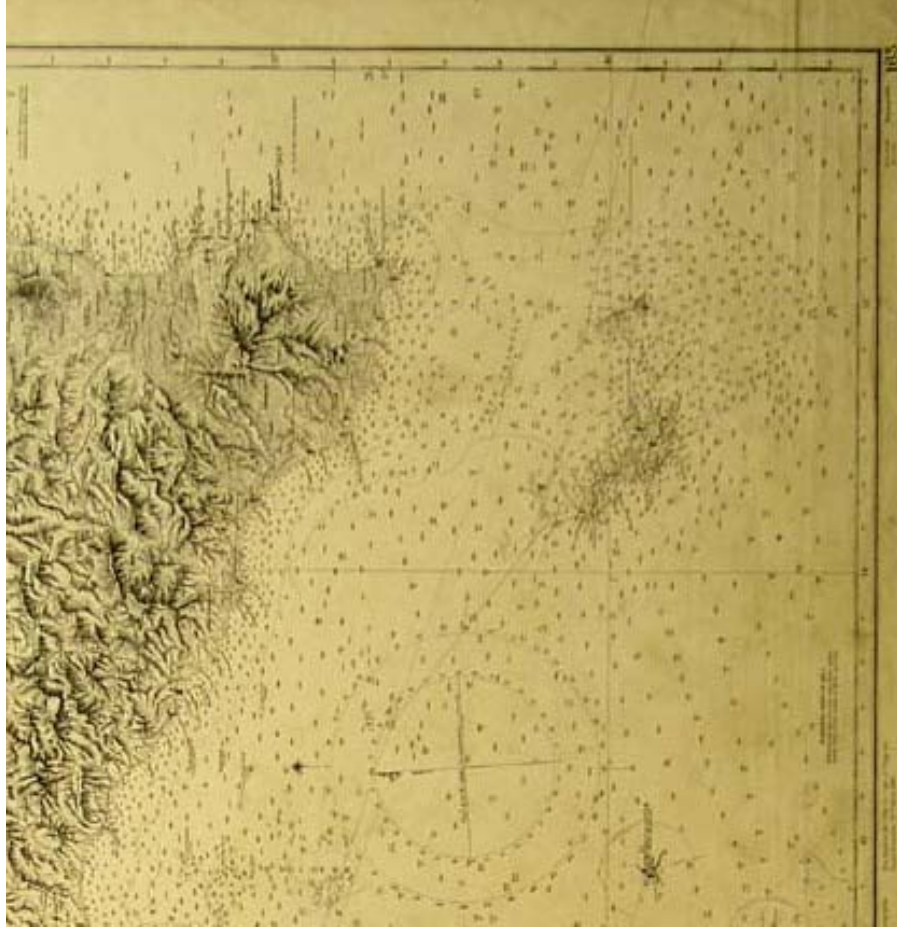
Source: Malta Maritime Museum, Malta

Malta to Crete

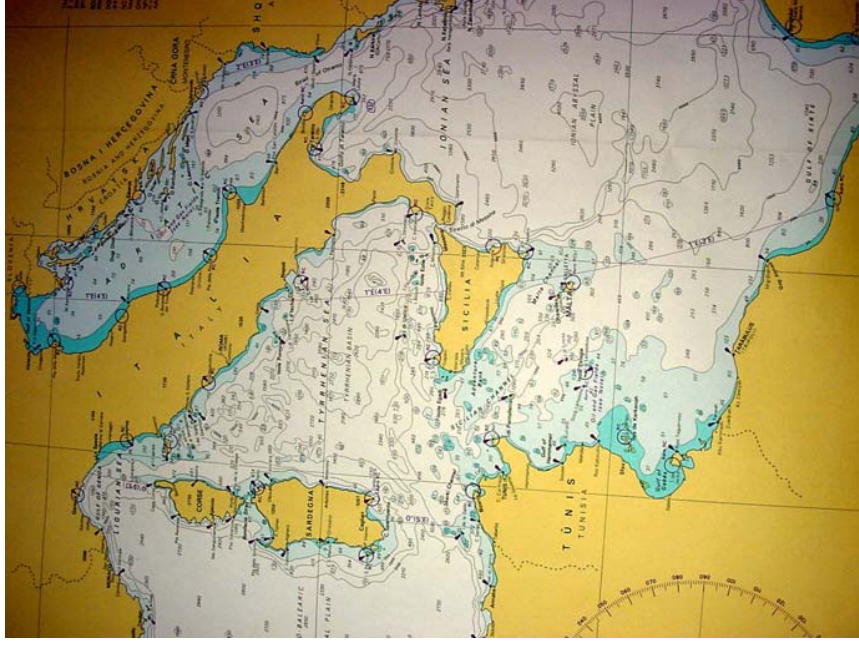
- Author: British Admirality
- Year : 1932
- Place: London
- Description: This is a very detailed chart which shows Malta, Crete, the southern end of Sicily. It also includes the southern extremity of the Peloponnesos Peninsula, as well as part of the coast of Libya. The chart depicts hundreds of depth soundings, courses, buoys, beacons and shows many small islands and channels in the Mediterranean and Aegean Seas.

Source: Private Collection

Mediterranean: Sardinia to Malta

- Author: British Admirality
- Year : 1880 (Updated 1946)
- Place: London
- Description:This is a chart with a large-scale depiction of Sicily & the North Tunisian coast. The map shows the southern coast of Sardinia, in top left corner, with the Gulf of Cagliari and includes Malta and the island of Pantelleria at the base of the chart. Thousands of depth soundings are indicated around coasts and in the bays, and the chart includes both topographical and hydrographical details.One may note that by this period the Malta-Sicily channel has been charted in great detail: a great difference from charts of a Hundred years before.

Source: Private Collection

Mediterranean: Sardinia to Malta (detail)

Source: Private Collection

Central Mediterranean

- Author: United Kingdom Hydrographic Office
- Year of Publication: 2003
- One of the most recent depictions of the central Mediterranean.
- It depicts the culmination of knowledge of seabed soundings and other information gathered over the centuries.

Source: Dr. T. Gambin

Torri costiere e fortificazioni in Sicilia e a Malta in età moderna

Salvo Pappalardo

Introduzione.

Questo lavoro si propone di analizzare i modelli di fortificazione adottati in Sicilia e a Malta nel corso dell'età moderna. Le differenti concezioni dell'organizzazione spaziale del territorio, concepite nel corso dei secoli dell'età moderna da Cavalieri e vicerè, suggerisce uno approccio comparativo delle due realtà, che faccia emergere le varie tipologie di intervento, o di adattamento del già esistente.

Alla fine del Cinquecento, in corrispondenza a un'accresciuta insicurezza delle acque mediterranee e alla conseguente recrudescenza delle incursioni a danno delle popolazioni costiere [Braudel, 2004[4]; Bono, 1964; Bonaffini, 1983], il viceré di Sicilia incaricò, a distanza di pochi anni, due ingegneri militari, Tiburzio Spannocchi e Camillo Camilliani, di censire le opere di fortificazione già esistenti, elaborandone un piano di ristrutturazione che consentisse di renderle compatibili alle esigenze dettate da un'accresciuta potenza di fuoco [Camilliani, 1877; Spannocchi, 1993]. I progressi tecnologici compiuti nel campo dell'artiglieria avevano infatti dimostrato l'inadeguatezza di alcune di queste opere difensive, che talvolta non erano costituite che da semplici torri di avvistamento. Da alcuni decenni ormai si pensava di intervenire lungo le coste dell'isola, al fine di creare quelle condizioni di maggiore sicurezza da più parti richieste. Nonostante i progetti di metà secolo e i primi interventi ordinati per volere del viceré De Vega, tuttavia non si erano raggiunti i risultati sperati. Gli anni '60 del secolo non avevano risolto la dicotomia interna all'Impero spagnolo che prevedeva due linee di intervento opposte: la guerra nelle Fiandre e la pace nel Mediterraneo o la lega contro gli Ottomani a vantaggio della pace nell'Europa del Nord. Il viceregno siciliano si trovò invischiato in questa situazione che non consentiva di fare programmi a lungo termine. Dopo la morte del viceré Ferdinando Avalos de Aquino, marchese di Pescara, e l'esito della battaglia di Lepanto a tutto vantaggio degli Spagnoli, che riuscirono a danneggiare gli Ottomani senza favorire i Veneziani, il governò dell'isola passò al Presidente del Regno, il siciliano Carlo d'Aragona Tagliavia, marchese di Terranova. Fino al 1577, infatti, non venne nominato nessun successore al marchese di Pescara, cosicché il governo dell'isola andò, di fatto, nelle mani del nobile siciliano. Il programma del marchese di Terranova prevedeva alcuni punti programmatici in contrasto con le direttive fino a quel momento emanate. Oltre al proposito di occupare e fortificare la costa africana da Tripoli a Tunisi e controllare la sicurezza delle acque tramite una flotta la cui base strategica sarebbe stata a Messina, aveva in mente di "nazionalizzare" i compiti e le responsabilità della difesa delle varie parti del Regno [Giarrizzo, 1981]. In questo contesto, emerse l'idea di un grande progetto unitario di fortificazione e controllo delle rive, garantito solo dalla creazione e dalla gestione centralizzata di una serie di torri costiere. Grazie a questi progetti venne affidato questo gravoso compito a due ingegneri militari tra i più stimati dell'epoca, in due distinti momenti, nel 1578 e nel 1583.

Le ricognizioni di Spannocchi e Camilliani non furono un episodio isolato: abbiamo notizia di altre operazioni estensive di censimento, intraprese a metà Seicento [Negro, Ventimiglia, 1992] e agli inizi del secolo successivo [Massa, 1709; Villabianca, 1986], le quali, volte all'edificazione di nuove torri, oltre che al riadattamento delle vecchie alle nuove esigenze, contribuirono a creare il mito di una presunta impeccabile efficacia del sistema difensivo. La convinzione, per la quale un segnale in partenza da una torre potesse compiere il periplo dell'isola nell'arco di poche ore, ebbe infatti particolare fortuna nelle fonti coeve e perfino nella storiografia. In realtà, i suggerimenti di Spannocchi e Camilliani, così come dei loro successori, vennero accolti solo in parte dall'amministrazione e molti casi emersi dalle fonti lasciano intuire, piuttosto che un sistema programmato per funzionare in qualunque circostanza, un continuo adattamento della situazione alle circostanze via via presentatesi. In base agli studi finora condotti sul territorio, sono emersi diversi vuoti visivi, dovuti alla distanza eccessiva tra due costruzioni che non consentiva la corrispondenza di fuochi e fumi tra i torrieri. I suggerimenti proposti alla Corte dai due ingegneri militari spesso non si sono tradotti in un'effettiva messa in pratica dei loro progetti [Aymard e Giarrizzo, 1987]. Oggi, diversi vuoti visivi sono presenti nella costa siciliana, e sud-orientale in particolare, come nel caso dell'area geografica compresa tra Torre Mazzarelli e Torre Scalambri o a nord di Torre di Donnalucata, solo per fare qualche esempio. Talvolta, la comunicazione tra le guardie in servizio in due torri, tra loro non comunicanti, era assicurata da gente stipendiata dai comuni circostanti, la quale si incaricava di coprire a cavallo la distanza esistente tra i due siti. Talaltra, la distanza era coperta grazie al passaggio fortuito e occasionale di imbarcazioni lungo la costa, che all'occorrenza, se adeguatamente armate, potevano anche intervenire militarmente per scongiurare il pericolo incombente, sostituendosi di fatto al compito di vigilanza delle galere stipendiate dalla Corte. Il cinquecentesco storico dell'Ordine di San Giovanni, Giacomo Bosio, riporta che il 20 agosto 1542 il Generale delle Galere dell'Ordine, che era di passaggio lungo le coste siciliane, a Pozzallo fu avvisato dalla vedetta di quella torre che nei pressi Capo Passero, poco distante, si erano appostate due imbarcazioni di corsari musulmani.

Infatti, una torre non era spesso in grado di proteggere il vascello mercantile che si stazionava nel suo arco visuale o che si riparava sotto la portata delle sue bocche da fuoco. I motivi potevano essere di svariata natura: dall'assenza tanto momentanea quanto ingiustificata dell'intera guarnigione, che spesso era occupata nell'esercizio di un secondo lavoro, alla carenza di munizioni che rendeva i soldati preposti alla vigilanza del sito spettatori impotenti dell'aggressione. Come dimostra il processo a carico degli occupanti della torre Mazzarelli, non mancavano neppure i cosiddetti casi di "viltà" [Agnello, 1964].

Molti aspetti riguardanti la questione delle torri siciliane consentono di procedere a un'analisi comparativa delle fortificazioni costiere maltesi. Quando, nel 1743, il Gran Maestro e il Consiglio ne ordinarono una ricognizione, dal rapporto emerse che le torri servivano più alla sorveglianza del mare che alla difesa [Muscat, 1981]. L'ambivalenza delle torri, dunque, centro di vigilanza e, se adeguatamente munite, avamposto militare, nel caso maltese si risolveva generalmente in una predisposizione al primo ruolo, che non al secondo, il quale veniva piuttosto espletato da sistemi fortificati più complessi.

La ricerca è stata sin qui condotta su fonti primarie e bibliografiche. Presso l'Archivio di Stato di Palermo sono state consultate le buste della Deputazione del Regno, in particolare i voll. 261 e 262, riguardanti relazioni su torri e ponti e sui salari dei cosiddetti "torrieri", ovvero le guardie preposte alla sorveglianza all'interno delle torri. Entrambe le buste si riferiscono a un periodo compreso tra la fine del XVI secolo e l'inizio del successivo. Presso la Biblioteca Regionale e quella Comunale di Palermo si è presa visione di alcune carte settecentesche inerenti le torri siciliane chiamate "di Deputazione", costruite cioè per volontà e sovvenzione vicereale, che si differenziavano da quelle fatte erigere da privati.

Presso l'Archivio di stato di Venezia, invece, è conservata una copia della relazione redatta da un ingegnere militare, il conte Valperga, il quale era stato incaricato dai vertici dell'Ordine di formulare proposte in grado di risolvere alcuni problemi difensivi di La Valletta. Non è indicata purtroppo la data, ma dalle caratteristiche del manoscritto si evince che sia stato realizzato tra la fine del XVII secolo e l'inizio del successivo. La relazione è inedita ed è stata rinvenuta tra altre carte di pertinenza maltese.

Tra i documenti dell'Archivio dell'Ordine di Malta si è privilegiato il vol. 1011, appartenente all'Appendice della VI Classificazione: Congregazione della Guerra. Il volume in questione contiene diverse relazioni di ingegneri militari, in merito alla fortificazione delle isole di Malta e Gozo, commissionate dal Consiglio dell'Ordine tra il XVI e il XVII secolo.

Tra le fonti edite, imprescindibile si è rivelata l'opera di Giacomo Bosio, così come le già citate relazioni di Spannocchi, Camilliani e Ventimiglia, le quali sono state messe alla prova dall'evidenza archeologica delle costruzioni censite o proposte. I ragguagli settecenteschi di Massa e Villabianca, seppur talune volte acritici ed improbabili, si sono rivelati preziosi, fornendo talvolta ottimi indizi per individuare costruzioni di secondaria importanza e che già versavano in pessimo stato di conservazione agli inizi del Settecento. Ci si è poi serviti della carta realizzata da Cesare Bovo a inizio Ottocento, raffigurante i luoghi delle principali incursioni corsare sulle coste siciliane.

Quanto alla moderna letteratura sull'argomento, la storiografia non si è soffermata in maniera esaustiva sul fenomeno della costruzione e della gestione delle torri costiere siciliane e maltesi. Tra coloro che hanno dedicato una certa attenzione alla questione, è da segnalare lo studio di Mazzarella e Zanca, pubblicato nel 1985. Oltre al volume citato, sono apprezzabili alcuni lavori miscellanei che prendono in esame solo particolari luoghi delle coste siciliane e che sono stati editi a partire dagli anni '90. Spesso la storiografia sull'argomento ha privilegiato la ricerca sui castelli isolani, finendo per dedicare minore attenzione agli aspetti legati alle torri costiere. Per tale ragione sono auspicabili ulteriori studi che possano far evolvere la ricerca sui temi della difesa costiera e della sicurezza dei mari, tanto cari ai governanti di età moderna.

Avvistare (e proteggere ?): il caso siciliano.

Uno dei caratteri che colpisce l'attenzione dello studioso e del visitatore è l'eterogeneità di costruzione della rete di torri costiere lungo l'intero periplo dell'isola e, in particolare lungo il versante sud-orientale. Si può immaginare il sistema difensivo costiero siciliano come una catena composta da maglie fitte e diversificate, talvolta persino realizzate con differenti materiali. Spannocchi e Camilliani, la cui opera si proponeva di mettere in sicurezza l'intero territorio costiero isolano, intervennero con i loro pareri e le loro proposte su un impianto preesistente e frutto di secolari stratificazioni [Dufour, 1992; Scarlata, 1993; Polto, 2002; Militello, 2004].

I loro suggerimenti vennero tuttavia realizzati solo in parte. Antonella Mazzamuto fa osservare, a questo proposito, che ogni qual volta la Corte era chiamata ad intervenire in merito alla costruzione di una nuova torre il sito scelto era quello proposto da Spannocchi, nonostante il parere negativo di Camilliani, mentre il caso opposto si doveva realizzare solo due volte [Mazzamuto, 1986]. Non erano messe in discussioni competenze e professionalità dei due ingegneri militari, ma sembra avere un peso preponderante in questa scelta il minor numero di interventi proposti da Spannocchi. La correlazione tra le costruzioni da effettuare *ex novo* e la spesa necessaria a realizzarle diresse la scelta dei governanti siciliani. I costi per la fabbricazione di tutte le torri mancanti al completamento del fitto reticolo difensivo isolano, immaginato dai due ingegneri rinascimentali, giocarono senz'altro un ruolo non indifferente. I governanti dovettero valutare la plausibilità finanziaria della costruzione di fortificazioni in relazione ad altre voci di esborso relative alla difesa dell'isola, come, per esempio, il mantenimento di una squadra di galere, che veniva assicurato per la maggior parte tramite il pagamento di assentisti genovesi [Lo Basso, 2003]. Una torre veniva edificata in Sicilia, e solo in Sicilia potevano misurarsi i vantaggi derivanti dalla sua costruzione, mentre il servizio di una galera avocava ai viceré benefici dettati da una più ampia possibilità di manovra. Avere galere al servizio implicava la possibilità di disporne per acconsentire a richieste provenienti da autorità del mondo cristiano alle quali i viceré non potevano sottrarsi, come quelle del sovrano spagnolo o dal papa. Almeno fino alla prima metà del XVII secolo, quindi, la costruzione di nuove torri venne posta in diretta concorrenza con le risorse da destinare alle galere.

Nonostante l'impossibilità di attingere al bilancio dell'isola per soddisfare tutte le esigenze difensive, il fatto stesso che le autorità spagnole provvedessero a incaricare tecnici competenti a realizzare censimenti e relazioni testimonia un'attenzione a una molteplicità di questioni pertinenti la Sicilia. Tale interesse risulta visibile da una particolare sensibilità alla corografia del territorio, così come dalla valutazione del valore strategico di un sito. La *Descrizione dell'isola di Sicilia* di Camilliani e la *Descripcion de las Marinas de todo el Reino de Sicilia* di Spannocchi rappresentarono un risultato di alto livello, che si rivelò un imprescindibile punto di partenza per l'intervento sul territorio delle autorità statali. Allo stesso tempo, queste opere hanno creato una letteratura sull'argomento che non poteva essere trascurata da chi, anni dopo, sarebbe stato chiamato alle stesse ricognizioni o a esprimersi sullo stesso tema.

In ogni caso, identificare un luogo ove far erigere una torre, o sottoporre all'opera di ammodernamento una costruzione già esistente, era una scelta che dipendeva da criteri ben precisi. Di solito, la torre era posta a protezione di porti o città, ma altrettanto spesso

la si costruiva per difendere o sorvegliare luoghi strategici, anche distanti dai principali centri urbani, per esempio, alle foci dei fiumi dove i corsari avrebbero potuto rifornirsi di acqua (Torre Vigliena) o su alture e scogliere, che avevano il vantaggio di godere di un'ottima visuale (Torre Scalambri).

In genere, però, l'edificazione di una torre rifletteva un equilibrio di poteri esistenti sul territorio, dal momento che l'opera difensiva costiera altro non era che un cospicuo investimento di capitali e mezzi, mirato alla salvaguardia di precisi interessi. In quanto tale, lo studio delle sole torri effettivamente realizzate permette l'analisi di fenomeni più complessi e che interessavano in profondità le società del tempo, in quanto la variazione nella geografia difensiva isolana rifletteva una mutazione di equilibri sociali ed economici. Questo processo è osservabile in tutti i casi di torri fatte erigere a protezione di attività commerciali, come, ad esempio, trappeti e tonnare. Per il primo caso, è particolarmente significativa la costruzione della torre del Fico, eretta nella prima metà del XV secolo, con concessione della Corte d'Aragona, a protezione di una piantagione di canna da zucchero che avrebbe dovuto impiantarsi nelle terre a ridosso della torre. Quelle poste a protezione delle tonnare, invece, sono numerose e disseminate lungo l'intera costa siciliana.

Come afferma Maurice Aymard, mentre nella Sicilia interna si verificò una vittoria senza appello dell'aristocrazia fondiaria, lungo la costa le dinamiche furono assai più complesse. I capitali e le iniziative "industriali" e commerciali provenivano anche dai patriziati urbani e da mercanti e uomini d'affari detentori di capitali [Aymard, 1993]. Tale complessità di equilibri e dinamiche fece sì che lungo le coste siciliane fosse presente una vasta eterogeneità di modelli costruttivi. Accanto agli edifici più antichi, realizzati nel XIV secolo, come Torre Cabrera a Pozzallo o Torre Stampace nelle marine di Noto, si aggiunsero alla fine del XVI secolo le già citate torri di Deputazione. Questa differenziazione architettonica rappresentò un valore aggiunto in epoca moderna, in quanto fornì, a chi ne progettava la costruzione, diverse soluzioni realizzative suggerite dalle forme progettuali già esistenti. Nonostante i rifacimenti successivi, dettati dai cambiamenti nelle necessità difensive, le torri più antiche erette da privati mantennero sempre una loro peculiarità rispetto alle altre, conservando una forma diversa all'esterno, sebbene irrobustite dall'aggiunta di bastioni per la difesa dalle potenziate artiglierie cinquecentesche. Alcune di queste non divennero mai di proprietà pubblica, ma restarono sempre in mano a privati, spesso discendenti dei fautori della loro edificazione. A chi appartenesse la torre rimane sempre un elemento importante per comprenderne il funzionamento. Sulla base dello statuto di proprietà, infatti, venivano fissate le condizioni di pagamento della guarnigione e si determinava l'armamento in dotazione e con esso la capacità di intervento della torre stessa.

Spesso, la costruzione di una torre a difesa del litorale creava tutte le condizioni affinché quel litorale si popolasse, attraendo magari dall'interno porzioni consistenti di popolazione. Secondo quanto suggerito da Maurice Aymard, infatti, la costa offriva delle possibilità di benessere e delle risorse da sfruttare per consistenti fasce di popolazione [Aymard, 1993]. In questo contesto, si inseriva la volontà politica della corte siciliana dell'epoca, che si proponeva di intervenire sul territorio. Si può facilmente osservare che la più alta densità di queste torri, come dimostra, tra gli altri, Lo Cascio, si trova nelle zone a ridosso di Palermo e lungo la costa meridionale dell'isola [Lo Cascio, 2000]. Il potere centrale, che prima del Trecento aveva sempre considerato la costa di

Mezzogiorno di scarsa importanza strategica, dovette dunque risolversi a una sua rivalutazione. Questa riconsiderazione non fu tale da mutare le considerazioni sulla centralità strategica ed economica di Messina, considerata fondamentale ai fini del possesso dell'isola, rispetto alla quale perfino Palermo veniva considerata un obiettivo di secondaria importanza. Sia che si temesse un'aggressione ottomana o, più tardi, francese, sia che invece si trattasse di incursioni corsare, la città dello Stretto rimase per tutta l'età moderna il punto nodale del sistema difensivo siciliano.

In quest'ottica, venne agevolata la costruzione di opere difensive da parte di privati e piuttosto venne prestata attenzione alla fortificazione di città come Siracusa e Augusta, di grande importanza strategica nella difesa dell'isola. Alla fine del XVI secolo, si giunse così a una situazione di forte differenza di densità demografica a favore della costa di Levante rispetto a quella meridionale. In questi luoghi, la decisione di potenziare la difesa era spesso la conseguenza di ripetute incursioni, che sfociavano in depredazioni o deportazioni in massa di una parte cospicua dei suoi abitanti, ridotti in schiavitù. Così, dopo il saccheggio di Licata, vennero erette nuove opere di difesa del sito, mentre a Marsala si ricorse all'estrema soluzione dell'interramento del suo antico porto punico, che si riteneva non difendibile con i mezzi a disposizione. Anche se non si arrivava a misure drastiche, come quelle della distruzione di Mehedia o Città d'Africa e il conseguente interramento del suo porto ad opera degli Spagnoli, poco dopo la conquista negli anni '50 del XVI secolo, risulta comprensibile come questi estremi provvedimenti causassero un progressivo declino economico dell'intera area.

La maggiore attenzione dei governanti si concentrava comunque in tutti quei luoghi e quei siti ove le carenze difensive creavano situazioni di emergenza. Tali disagi originavano degli squilibri economici e sociali che si ritorcevano contro gli interessi della stessa Corte siciliana. La riduzione in schiavitù di parte della popolazione si traduceva in mancate entrate fiscali e in una possibile riduzione del traffico di cabotaggio. Oltre che per motivi direttamente collegabili a fattori fiscali ed economici in senso lato, potevano risultare di primaria importanza le questioni legate al prestigio della Corte. La capacità di difendere genti, città e commerci dalle depredazioni dei corsari doveva avere delle ricadute sia all'interno che all'esterno del Regno. Affermare fuori dai confini siciliani un certo grado di funzionalità ed efficienza del sistema difensivo poteva far crescere la considerazione presso le altre corti europee e creare un disincentivo in chi avrebbe potuto progettare attacchi e depredazioni. Le ripercussioni interne ai confini del regno potevano anche essere maggiori. L'affermazione della centralità della Corte in alcune questioni delegittimava e metteva in posizione di secondaria importanza chi quei ruoli li aveva svolti in passato e avrebbe magari voluto continuare a svolgerli. I poteri locali, quando non già materializzati nelle costruzioni di torri preesistenti, venivano esautorati da funzioni che con le nuove costruzione ad opera della Deputazione non potevano più risultare di loro competenza. Tutto ciò può, in parte, spiegare oggi la massiccia presenza di torri di Deputazione sulla costa meridionale della Sicilia, una zona ricca di caricatori (porti frumentari) e strategica per la Corte ai fini delle entrate doganali, oltre ad essere sede di traffici commerciali con le coste Nordafricane. Come è noto, il XVI secolo fu per la Sicilia l'epoca d'oro dell'esportazione del grano, che avvenne in un periodo di congiuntura economica inflazionistica, quindi a condizioni molto vantaggiose per i produttori e per la Corte, che traeva beneficio dalle ingenti entrate doganali. Proprio nella seconda metà del Cinquecento, divenne importante per la Corte, interessata allo stabile

andamento delle esportazioni, garantire la sicurezza del mare e delle coste. In questo contesto, si inserirono le ricognizioni di Spannocchi e Camilliani, che ebbero l'obiettivo ambizioso di creare sicurezza nell'isola in modo da riuscire a prevenire l'eventualità di un pericolo. La compresenza di diversi stili architettonici, differenti modalità amministrative e di gestione delle torri esistenti sulla costa orientale, laddove la sola Torre di Vendicari venne fatta edificare dalla Deputazione, denota dunque, come si è già avuto occasione di osservare, una molteplicità di interessi economici preesistenti al secolo del grano e all'idea di intervento da parte delle autorità statali.

A difesa della nuova città: il caso maltese.

La sua diversa posizione geografica, la differente orografia del suo territorio e la sua limitata estensione furono i fattori sui quali si può misurare la peculiarità del caso maltese rispetto a quello siciliano. A Malta, l'arrivo dei Cavalieri gerosolimitani rivoluzionò l'assetto difensivo dell'Arcipelago. L'impianto preesistente risaliva, infatti, a una concezione medievale della difesa, per quanto quest'ultima si fosse comunque rivelata efficace nel resistere alle eventuali incursioni, le quali, tuttavia, aumentarono di intensità all'indomani dell'arrivo dei Cavalieri, quando cioè la popolazione venne esposta a rischi di rappresaglie. Prima del 1530, infatti, il sistema difensivo dell'arcipelago maltese era incentrato sulla sola fortificazione di Mdina, la Città Notabile che domina l'isola dall'altezza di un colle, coadiuvata da alcune agili torri disseminate lungo la costa. Queste avevano lo scopo di comunicare un imminente pericolo alla popolazione, la quale avrebbe trovato rifugio tra le mura della cittadella fortificata.

L'arrivo dei Cavalieri stravolse molti assetti consolidati nella vita dell'isola. Innanzitutto, il luogo scelto per l'istallazione del loro Convento, a ridosso del porto naturale e lontano dalla Notabile, mutò gli equilibri abitativi e difensivi dell'isola. Le fortificazioni si concentrarono in seguito sulla costa e nelle vicinanze del porto, facendo, lentamente ma inesorabilmente, perdere importanza alla vecchia capitale. Un'intera città sorse dal nulla sul promontorio Schiberras, che si affaccia sul mare, mentre per realizzare le opere di fortificazione vennero chiamati i migliori ingegneri militari dell'epoca, i quali ebbero dunque il vantaggio di non dover fare i conti con un sistema difensivo preesistente, ma con singole opere isolate e da riadattare alle mutate esigenze del tempo.

Le fortificazioni attualmente visibili furono il frutto di aggiunte e correzioni avvenute nell'arco dei tre secoli del dominio dell'Ordine sull'isola, creando così una stratificazione di stili e progetti convergenti su un medesimo risultato: l'efficienza della difesa. Gli ingegneri e tecnici più all'avanguardia in Europa vennero chiamati a fortificare l'isola [Mangion, 1973; Mallia Milanes, 1983 e 1986]. Spesso, nel caso siciliano, come afferma anche Mazzamuto, il parametro principale fu quello della massima economicità e la soluzione progettuale dell'opera, di conseguenza, non fu la migliore in assoluto, ma tra quelle economicamente sostenibili [Mazzamuto, 1986]. Nel caso maltese, invece, le maggiori capacità di spesa e le avanzate esigenze dei committenti contribuirono a creare le condizioni di un risultato qualitativamente superiore. Le potenze che avrebbero potuto procedere a un assedio dell'isola, per esempio gli Ottomani, erano infatti tali da poter essere contrastate solo con un sistema di fortificazioni moderne, costruite secondo i principi delle più avanzate teorie del tempo.

I Cavalieri, tuttavia, ritenevano di non dover mantenere Malta come sede definitiva del loro Ordine, ma come residenza provvisoria che facesse concludere il loro peregrinare che durava dal 1523, anno della perdita di Rodi. Nel 1529, la commissione incaricata dal Gran Maestro di procedere a una ricognizione dell'isola di Malta, diede parere negativo all'installazione del Convento. Anche la storiografia più vicina alla Religione testimonia la volontà dei vertici gerosolimitani di spostarsi, permutando l'arcipelago mediterraneo con una sede che avrebbe comportato una spesa minore per la fortificazione. Per alcuni decenni dopo l'insediamento nell'isola, almeno fino alla perdita del castello di Tripoli, avvenuta nel 1551, parve plausibile procedere al trasferimento della sede in Sardegna, in Sicilia, lungo le coste maghrebine o presso piazzeforti veneziane in Levante. Malta, con l'aggravante iniziale della difesa del presidio tripolino, era vista come una soluzione di compromesso tra le esigenze dell'Ordine, di avere una residenza, e la volontà politica dell'imperatore Carlo V, in merito al mantenimento dei suoi *presidios* nordafricani.

Dopo il 1551 emerse tra i membri dell'Ordine la consapevolezza di doversi stabilire definitivamente a Malta, per quanto questo implicasse ingenti spese di fortificazione. Su questo mutamento di prospettiva e in particolare sull'esigenza di potenziare la difesa, giocò un ruolo decisivo l'incursione compiuta da Dragut a settembre del 1550, in seguito alla quale ebbe inizio la costruzione del forte Sant'Elmo [Brogini, 2006].

Fino a quel momento, però, frequenti erano state le tensioni con la Corte siciliana sull'estrazione di grano, armi e munizioni. In particolare, i viceré tendevano a non voler accordare ai Cavalieri l'esenzione del dazio sul grano, chiamato tratta, prevista per editto imperiale. Tali contrasti erano occasione di rimostranze da parte dell'Ordine presso la corte di Madrid, alla quale si faceva pesare l'impossibilità di procedere a un'adeguata difesa dell'isola assegnata.

Numerose erano all'interno dell'Ordine le resistenze a intraprendere opere di fortificazione che sanzionassero la decisione – spontanea o indotta che fosse – di restare a Malta. Giacomo Bosio riferisce lo scontento di molti Cavalieri nel 1541 verso il Gran Maestro d'Homedes, colpevole di aver speso una somma eccessiva in opere di difesa che si sarebbero, per giunta, rivelate sostanzialmente inutili. In questo caso, i Cavalieri restii a rimanere nell'isola poterono contare su un valido pretesto per attaccare l'operato di chi cominciava a rassegnarsi a una stabile installazione. L'anno precedente, infatti, uno dei più apprezzati ingegneri militari dell'epoca, il Ferramolino, chiamato a dare un parere su ciò che era più necessario alla difesa, si era espresso in favore della costruzione di un forte all'estremità della penisola dello Schiberras, l'odierno forte Sant'Elmo. Questi, inoltre, riteneva inutile potenziare il preesistente forte Sant'Angelo, perché senza la protezione all'ingresso del porto, ove sarebbe invece sorto il forte Sant'Elmo, la resistenza a un assedio risultava estremamente difficile. Oltre tutto il forte Sant'Angelo aveva lo svantaggio, dal punto di vista militare, di poter essere attaccato alle spalle, dall'entroterra montuoso dell'isola. Per tale motivo, qualunque tipo di intervento a questo sito avrebbe dovuto essere preceduto dalla fortificazione delle alture soprastanti, cosa che sarebbe realmente avvenuta più tardi, nel corso del Seicento, per opera di altri due ingegneri militari, Marculano da Fiorenzuola e il conte savoiardo Maurizio Valperga. Nonostante l'autorevole parere del Ferramolino, il Gran Maestro scelse la soluzione che avrebbe comportato un minore costo e un altrettanto minore tempo di realizzazione. Tale scelta non fu operata per mancanza di denaro, in quanto si poteva contare su una disponibilità di capitale da poco prelevato dal Monte di San Giorgio di Genova. Sembra

piuttosto che ciò che influì maggiormente su questa decisione sia stata la scarsità di tempo a disposizione in previsione di un attacco ritenuto imminente.

In questo caso, la differenza con la Sicilia e con l'amministrazione dei viceré appare evidente. La risorsa scarsa per i Cavalieri era il tempo, per timore di un'aggressione, e non, come nel caso siciliano, il fattore economico, che aveva imposto per lunghi tratti dell'epoca moderna una scelta tra torri o galere.

La data che si presta come fine del periodo di transizione tra la volontà di trasferirsi e la necessità di rimanere fu il 1565. Solamente dopo l'assedio ottomano si comprese chiaramente che la sopravvivenza dell'Ordine era legata alla fortificazione dell'isola e alla volontà di stabilirvisi. Comunque, solo dalle macerie provocate dal lungo assedio si costruì la nuova città, La Valletta, e si consolidò l'idea che Malta non potesse avere alternative.

In questo nuovo contesto e con queste premesse, ebbero luogo le fortificazioni maltesi concepite dai progetti dei più autorevoli ingegneri militari dell'epoca. Lungo tutto il periodo di regno dei Cavalieri operarono nell'isola personaggi già attivi in altri scenari. Il bergamasco Ferramolino e lo spagnolo Pietro Pardo avevano offerto la loro opera in Sicilia al servizio di Carlo V negli anni '40 del secolo; i toscani Piccino e Laparelli erano stati impegnati il primo a Rodi precedentemente alla ritirata dei Cavalieri e il secondo al servizio dei Granduchi. Nella progettazione e nella costruzione della nuova città, La Valletta, l'Ordine ricorse ai progetti di Antonio Quinsani, Bartolomeo Genga, Baldassarre Lanci, Scipione Campi e Girolamo Cassar. Il Cavaliere e priore d'Ungheria, fra Gabrio Serbelloni, all'epoca del suo impegno a Malta, aveva già prestato servizio per Filippo II. Pier Paolo Floriani, invece, aveva servito papa Urbano VIII prima di giungere a Malta nel 1635 e la sua opera fu posta in diretta concorrenza con quelle proposte da Marculiano da Fiorenzuola e dal maltese Tommaso Dingli. Negli anni '60 e '70 del XVII secolo furono chiamati il savoiardo Valperga e l'olandese De Grünemberg, i quali potevano vantare esperienze su diversi fronti europei. Il '700 fu il secolo dei francesi, da Mondion e Tignè negli anni '20 fino a Tousand negli ultimi anni di permanenza a Malta. Per tutti i secoli della loro permanenza nell'isola, i Cavalieri si avvalsero dell'opera dei più esperti e apprezzati ingegneri militari. Mentre nel XVI secolo si ricorse all'opera degli italiani di diversa provenienza, la geografia mutò col passare dei decenni. Nel XVII secolo furono olandesi e non di rado si fece ricorso a esponenti di una scuola locale sempre più in crescita dal punto di vista qualitativo. Infine, durante il XVIII secolo il primato spettò ai francesi, la cui presenza a Malta era segno di un progresso tecnologico che quella scuola aveva conosciuto da Vauben in avanti.

Ciò che attraeva questa gente nell'isola dei Cavalieri erano diversi fattori individuati dalle fonti coeve nel denaro, negli ideali e nella possibilità di conseguire essi stessi il titolo di cavalieri. Tiburzio Spannocchi, per esempio, era già Cavaliere gerosolimitano quando compì il periplo delle coste siciliane e, in seguito ai servizi resi alla corte madrilena, venne nominato da Filippo II gentiluomo di camera. Questi eminenti personaggi, esperti nell'arte della fortificazione, grazie alla loro preparazione venivano richiesti dalle corti europee cosicché si trovavano a varcare di continuo i confini statali. Continuamente in viaggio, presenti nei maggiori teatri di guerra, spendevano presso le corti del tempo i loro titoli nobiliari, acquisiti grazie ai loro servizi, per ascendere ai livelli più alti della società. Il titolo conferito ad alcuni di loro dal Gran Maestro

diventava dunque una sorta di trampolino di lancio per raggiungere gradi, condizioni di vita e onori magari impensabili all'interno della loro patria natale.

Conclusioni.

Il caso delle torri costiere siciliane e maltesi e la fortificazione di alcuni dei luoghi ritenuti strategici o di particolare importanza nelle due isole permette di avanzare alcune conclusioni.

La conformazione geografica e l'estensione dell'Arcipelago maltese consentirono di concentrare gli sforzi economici e militari nella fortificazione di un'area circostante la nuova città dei Cavalieri. Le torri disseminate nell'isola, anche nelle aree meno densamente abitate, avevano il solo scopo di avvertire di un qualsiasi pericolo il centro nevralgico del potere, situato a La Valletta. Il contatto visivo tra due torri non era necessario, in quanto il passaggio di informazioni era assicurato da guardie e soldati a cavallo stipendiati dall'Ordine. Qualunque tipo di informazione non doveva dunque necessariamente raggiungere la guarnigione di un'altra torre prima di arrivare all'orecchio di chi prendeva le decisioni. Le torri maltesi avevano un funzionamento simile a quello delle terminazioni nervose, dal momento che trasmettevano ai vertici dell'Ordine ogni notizia di rilevanza, assicurando un contatto diretto tra il centro e una sua periferia. La limitata estensione dell'isola permetteva, a questo proposito, una centralizzazione della difesa e delle comunicazioni efficienti e veloci.

Dopo l'arrivo dei Cavalieri nell'isola, il centro economico e politico si spostò decisamente da Mdina a Valletta, ovvero dalla sede dell'Università a quella della Religione. Questo tipo di mutamento si rifletté nel programma di fortificazioni realizzato dopo il grande assedio. A partire dalla costruzione della città nuova si irradiò a ventaglio un sistema di baluardi e bastioni che circondò le alture circostanti assicurando la città sia da attacchi provenienti dal mare che dall'interno [Mangano di San Lio e Pagello, 2004]. Il prodotto finale, oggi visibile, fu il punto d'incontro di studi e progetti da una parte e di risorse ed esigenze dall'altra. In ogni caso, fu un processo inesorabile che non prevedette mai uno stornamento delle risorse a disposizione verso altre realtà dell'isola, nemmeno nei momenti di maggiore necessità per quei luoghi. Singolare fu il caso del terremoto del 1693, che provocò danni maggiori nella Città Notabile che non a La Valletta, ma che non venne seguito da interventi di restauro altrettanto rapidi nella prima che nella seconda città [Trigilia, 1996]. A differenza dal caso siciliano, infine, i Cavalieri furono capaci di risolvere ben presto, cioè dalla fine del XVI secolo, la tormentata scelta che avevano dovuto compiere i viceré. L'Ordine poté contare a partire dal 1598 su donazioni versate al Tesoro da vari Cavalieri, interessati direttamente o no alla gestione della squadra. Il sistema delle *fondazioni* assicurò alle casse del Tesoro la liquidità necessaria al mantenimento delle imbarcazioni pubbliche o alla costruzione di nuove in caso di perdita per cattura o affondamento delle vecchie [Grima, 1980].

La situazione siciliana si presenta ovviamente diversa, per motivi di carattere economico, geografico, politico e militare. L'intento, in questo caso, non era quello di progettare qualcosa di simile a un sistema nervoso, dotato di un centro e di sue terminazioni, quanto invece quello di creare un reticolo disseminato lungo la costa, con il compito di assicurare il passaggio di informazioni. Questo proposito, però, venne meno nell'impatto con la realtà e con le difficoltà incontrate dall'amministrazione. L'intenzione, almeno nella costa sud-orientale, era quella di inserire una serie di punti

forti in un sistema di snelle torri di avvistamento. I centri di questo sistema di fortificazione erano costituiti, oltrechè dalle fortificazioni di Siracusa, da Torre Cabrera a Pozzallo, dal forte di Capo Passero presso l'omonima località e da Torre Avalos nelle vicinanze di Augusta. Da qui era possibile affrontare in modo verosimilmente efficace un eventuale attacco, ma le altre postazioni lungo la costa spesso non potevano essere in grado di respingere incursioni e minacce.

Si può dunque osservare una prima differenza con il caso maltese, costituita da un policentrismo difensivo. Le maggiori dimensioni dell'isola imponevano una diversa dislocazione dell'apparato preposto alla difesa e le risorse, sempre scarse, da destinarvi venivano così disperse in molte necessità, con il rischio di far perdere d'efficienza alle misure poi portate a termine. Ciononostante, il sistema, nel suo complesso, avrebbe potuto assicurare una sua tenuta solo se avesse potuto contare su un diretto contatto visivo tra tutte le torri costiere. Soltanto in questo caso le galere al soldo della Corte, o quelle di confederati fortuitamente di passaggio, avrebbero potuto raggiungere i luoghi del bisogno. Se l'obiettivo rimaneva, sia nel caso maltese che in quello siciliano, difendere il territorio da un pericolo, bisognava che si mettessero i difensori nelle condizioni di agire. Se le torri maltesi assicuravano tutte un contatto diretto col centro tramite staffette stipendiate dall'Ordine, Cavalieri o soldati che fossero, quelle siciliane non sempre si vedevano e non sempre erano in grado di comunicare. Fissato dunque come obiettivo la difesa della costa e della popolazione che la abitava, il sistema di torri costiere siciliano fallì, riuscendo a garantire talvolta la sola zona di pertinenza della singola costruzione militare.

Infine, merita una considerazione la proprietà della torre. Mentre nel caso maltese la gestione di ognuna delle singole costruzioni era appannaggio dell'Ordine, la stessa cosa non avveniva nell'isola dei viceré. Molte torri costiere qui appartenevano a famiglie locali, che le avevano erette anche secoli prima in difesa dei propri interessi, politici o economici che fossero. Queste costruzioni erano la testimonianza diretta nel territorio di una molteplicità di poteri locali, presente soprattutto lungo la costa, che rendeva del tutto peculiare la geografia politica e amministrativa dell'isola [Iachello, 2002]. Anche dopo la ricognizione cinquecentesca, affidata ai due ingegneri militari, la Corte non riuscì o non volle entrare in possesso di queste costruzioni, continuando a delegare per decenni la difesa della costa e del territorio di sua competenza a privati, benché potenti. I tentativi di accentrare le responsabilità difensive come conseguenza della gestione diretta delle singole torri da parte della Corte fallirono alla fine degli anni '70 del XVI secolo. La costruzione di nuove torri, quelle di Deputazione, avvenuta più tardi, non fu una misura che spinse la Corte ad accentrare la gestione dell'intero sistema, favorendo piuttosto una disomogeneità che alla lunga doveva risultare sfavorevole ai suoi stessi interessi e a quelli dei suoi sudditi. Non è un caso, infatti, che nella parte sud-orientale dell'isola i tre principali punti forti, esclusa la città di Siracusa, Torre Cabrera, il forte di Capo Passero e Torre Avalos, fossero stati gestiti da privati per tutti i secoli dell'età moderna.

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SICILIA

Schede:

Torri della Sicilia sud-orientale:
1. Torre Vigliena; 2. Torre di Pietro; 3. Torre Scalambri; 4. Torre Mazzarelli; 5. Torre di Donnalucata; 6. Torre Sanpieri; 7. Torre Cabrera; 8. Torre del Focallo; 9. Torre delle Formiche; 10. Torre di Portopalo; 11. Forte di Capo Passero; 12 Torre di Fano; 13. Torre Marzamemi; 14. Torre Cittadella; 15. Torre di Vendicari; 16 Torre Stampace; 17. Torre Ognuna; 18 Torre Terraguzza; 19. Siracusa. Castel Maniace; 20. Siracusa. Castel Marchetto; 21. Torre Targia; 22. Torre Magnisi; 23. Torre del Fico; 24. Torre di San Cusimano; 25. Torre Avalos.
Fortificazioni di Malta:
1. Forte Sant'Angelo; 2. Forte San Michele; 3. Forte ; 4 la Floriana; 5. Fiorenzuola e Cottonera; 6. Forte Manoel.

1. Torre Vigliena

Indifferentemente indicata come torre "Brazzetto", "Portozzetto" o "Colombara"; nomi che traevano origine dall'influenza della toponomastica locale, si trova all'estremo del braccio della Colombara che termina nella punta Braccetto. Secondo quanto afferma Massa, ad inizio del XVIII secolo, essa si trova tra la punta di Spina di Pesce e la foce del fiume Santa Croce. Il sito si può raggiungere da un bivio della strada provinciale Scoglitti – Santa Croce Camerina.

La costruzione fu iniziata fu iniziata attorno al 1595 e fu ultimata verso il 1607, quando era in carica il viceré Giovanni Fernandez Pacheco marchese di Villena. A lui infatti si deve il toponimo. Si tratta di una torre di Deputazione di media grandezza, ma molto ben armata. Ospitava una guarnigione di 4 soldati, al contrario della maggior parte delle altre per cui erano previsti solo 3 soldati. Venne affidata alla soprintendenza del marchese di Santa Croce, Celestri, che si fece carico anche di parte delle spese di costruzione. Da un manoscritto conservato presso la Biblioteca Comunale di Palermo si apprende che, all'inizio del XVIII secolo, i soldati che prestavano servizio presso la torre erano a carico dei giurati di Ragusa e che la dotazione di artiglierie constava di «2 cannoni di ferro con sue casse e rote, 5 canne di moschetto, 1 campana rotta, 1 moschettone di posta con suoi tilari, 1 mascolo di bronzo e 22 palle di ferro».

Oggi la torre risulta quasi del tutto demolita, in quanto rimane solo una parte della zona basamentale a sezione quadrata di m. 10.70 di lato.

Fu eretta in zona pianeggiante nelle immediate vicinanze del mare con lo scopo di controllare i due golfi sottostanti. Nell'intento delle autorità committenti doveva sorvegliare la foce del fiume Santa Croce, dove avrebbero potuto andare a rifornirsi d'acqua eventuali imbarcazioni corsare. Inoltre, si trova a ridosso di una naturale curvatura circolare del lido tanto capace da far approdare diverse imbarcazioni. Corrispondeva verso sud con le vicine torri di Pietro e Scalambri, mentre a nord non aveva torri visibili. Nel progetto del Camilliani ad essa avrebbe dovuto corrispondere un'altra torre al Blanco Grande presso Camarana, ma questa non venne mai edificata. Durante l'ultima guerra mondiale fu sede di una postazione militare. A causa di questo suo ultimo uso presenta i segno del bombardamento dal lato mare.

2. Torre di Pietro

Questa torre era segnalata anche col nome di "Punta di Pietro", "di Santa Croce" e "di Mezzo". Quest'ultimo toponimo si deve al fatto che occupava una posizione mediana tra la torre Vigliena e la torre Scalambri. Si raggiunge dalla provinciale Santa Croce Camerina – Scoglitti, prima di giungere all'abitato di Punta Secca. La torre sorgeva tra la foce del fiume Santa Croce e la spiaggia di San Nicolò.

Come la precedente, vide la luce grazie ai progetti di Camilliani e venne ultimata nei primi anni del XVII secolo. Anch'essa era una torre di Deputazione edificata col concorso del marchese di Santa Croce. A quest'ultimo spettava la soprintendenza e la custodia, secondo quanto affermato da Massa. Aveva una

guarnigione di 4 soldati, un caporale, un artigliere e due soldati ed era munita di un normale armamento. In base al manoscritto palermitano si apprende che nel 1717 i quattro torrari erano a spese della Deputazione che sborsava la somma di 78 onze annue. La torre, inoltre, aveva una dotazione di artiglieria che comprendeva «6 moschetti, 1 mascolo di bronzo, 1 campana e 2 cannoni di bronzo con sue casse e rote».

Oggi non è rimasto che un rudere con lo spigolo nord a base scarpata e col classico marcapiano bombato che rendeva visibile dall'esterno la divisione tra il pian terreno dal primo piano. Analogamente alla precedente, l'impianto basamentale è a sezione quadrata di misura del tutto simile alla torre Vigliena.

L'intento di chi la progettò e di chi la realizzò era quello di impedire il rifornimento di acqua dal fiume Santa Croce (oggi prosciugato) ai corsari che vi si accostavano. Il corso d'acqua in questione aveva la sua foce nell'odierno territorio di Santa Croce Camerina, a occidente di Capo Scarami. Per questo motivo, il sito scelto per erigerla era una zona dotata di ampia visuale, anche se di poco elevata sul mare. Durante l'ultima guerra mondiale ha subito i maggiori danneggiamenti che l'hanno ridotta nelle pessime condizioni attuali.

3. Torre Scalambri

Indicata anche come "Scarami" o "torre di Punta Secca", dove quest'ultima denominazione le proviene dalla vicinanza con l'abitato omonimo.

Nasce come torre privata, a differenza delle precedenti, fatte erigere per iniziativa della corte siciliana. Alla fine del XVI secolo era già stata ultimata ed era entrata attivamente a far parte nel sistema difensivo costiero, infatti nel 1597 un tal Giovanni Bellomo patteggiò le spese di mantenimento della torre con la Deputazione. In seguito, tuttavia, passò sotto il diretto controllo dell'organo amministrativo siciliano il quale fece particolare attenzione a munirla di artiglieria e di una buona guarnigione di soldati. A seconda delle esigenze del momento particolare, i torrieri di guardia assegnati alla torre arrivarono al numero di cinque. Fino al 1621 la soprintendenza appartenne a un altro membro della famiglia Bellomo, ma un decennio più tardi questa passò al marchese di Santa Croce. Anche i soldati della guarnigione di questa torre erano a carico della Deputazione palermitana che spendeva nel 1717 la stessa cifra sborsata per la torre di Pietro per stipendiarli, ovvero 78 onze annue. Sempre a quella data, la dotazione di artiglieria invece constava di «6 moschetti, 1 cannone di bronzo, 4 moschetti di passo, 4 laparde, 1 mascolo di bronzo grande, 1 campana rotta, 2 mascoli di petriere».

L'aspetto esterno osservabile dopo secoli risulta completamente stravolto dalla sua immagine originale. Nella facciata, un intonaco a cemento di colore grigio, un passaggio aereo a quota di primo piano con scala esterna sul fronte sud – est che si appoggia a un edificio recente e l'inserimento su tre lati di tre balconi in muratura moderna ne hanno sensibilmente modificato le sembianze tardo cinquecentesche. La forma resta comunque parallelepipeda con pianta quasi quadrata, con i lati che misurano m. 8.50 x m. 9.20. Presenta, in maniera originale, una scarpa esterna verso il mare. Il fatto che nasca anteriormente al progetto camillianeo le conferisce caratteristiche architettoniche peculiari, il che la rende diversa dalle altre.

Questa torre venne presa in considerazione dal Camilliani perché situata in luogo strategico per la guardia delle coste, in quanto si trovava in un sito dove i vascelli provenienti dall'isola di Malta approdavano, costeggiando l'isola. Il suo recupero e il suo potenziamento era finalizzato, quindi, alla protezione del traffico commerciale e di cabotaggio tra Malta e la Sicilia. A nord corrispondeva con la torre di Punta di Pietra e a sud avrebbe dovuto corrispondere, secondo il progetto camillianeo, alla torre dell'Anecheghef progettata alla punta delle Mole e mai realizzata.

4. Torre Mazzarelli

Questo edificio viene di solito indicato anche col nome di torre "Cadimeli" dal nome del feudo nel quale fu costruito. I resti della torre si trovano all'interno del paese di Marina di Ragusa (denominato "Mazzarelle" in epoca fascista), molto vicino al mare. Oggi però altre costruzioni edificate nelle sue vicinanze ne oscurano la visuale alle spalle.

Le prime notizie certe della sua esistenza sono databili alla seconda metà del XVII secolo, ma la sua erezione è molto probabilmente precedente. Lo Spannocchi propose di costruirla, ma Camilliani si espresse negativamente in merito. Secondo quanto fa osservare Antonella Mazzamuto, esaminando la totalità delle torri effettivamente costruite successivamente alla visita dei due ingegneri, queste furono realizzate nei luoghi previsti dallo Spannocchi, nonostante il parere negativo del Camilliani. Il caso opposto si è verificato soltanto due volte. Anche questa è torre di Deputazione, la quale si fece carico di mantenere i quattro soldati della guarnigione e di fornirla di buona artiglieria. Dalle prime notizie possedute, la soprintendenza della torre fu affidata ai duchi di San Filippo della famiglia degli Arezzo. Il Villabianca

aggiunge che la gestione spettò a loro, in quanto baroni del feudo di Cadimeli, all'interno del quale sorge la torre. Solo dal 1808 questa passò al duca di San Lorenzo che non ebbe maggiore fortuna. Egli infatti si dimise nel 1811, lasciando l'incarico a Saverio Nicastro, all'epoca governatore di Pozzallo. Questi passaggi di mano furono dovuti ad accertate responsabilità dei soprintendenti, i quali nel corso degli anni si sono macchiati di vari reati. Tra questi, il contrabbando e la mancata vigilanza sull'operato dei torrari furono i maggiori capi di accusa formulati contro di loro. Sui soldati assegnati alla custodia spesso è ricaduta la colpa per le inefficienze funzionali della torre. Dalla lettura delle carte d'archivio emergono, infatti, diverse catture di bastimenti mercantili da parte di corsari barbareschi, proprio in prossimità della torre. Dai processi che ne seguirono spesso viene alla luce una cronica mancanza di polvere e munizioni o la colpevole assenza dei torrari al momento delle catture corsare. Infine, nel 1717 un solo soldato della guarnigione, l'artigliere, era rimasto, pagato dalla Deputazione. Alla stessa data, la dotazione di artiglierie era composta da «2 cannoni cioè uno di bronzo e altro di ferro con sue casse e rote, 2 spingardi, 5 moschetti, 2 mascoli di ferro, 2 laparde, 1,50 rotoli di polvere, palle di cannone di rotoli 60, palle di piombo rotoli 12 e rotoli 12 di miccia».

Ciò che rimane del manufatto è un basamento con blocchi squadrati ottimamente conservati che supporta una terrazza di m. 8.50 x m. 13.50 all'appedamento. Oggi la costruzione è destinata ad uso abitativo e risultano apportate varie trasformazioni dalla sua forma originaria come, ad esempio, la scomparsa del ponte levatoio che ne permetteva l'accesso.

Venne eretta in prossimità della foce del fiume Irmino verosimilmente con lo scopo di impedire ai corsari il rifornimento d'acqua. Essa rimane nel mezzo del fiume di Ragusa e della punta detta di Longobardo, secondo quanto affermano Massa e Villabianca. A nord avrebbe dovuto corrispondere con la progettata torre alla punta della Mole mentre a sud con la torre di Donnalucata.

5. Torre di Donnalucata

Secondo quanto affermato da Massa, all'inizio del XVIII secolo la denominazione Donnalucata deriverebbe dalla corruzione della dicitura araba *Ayn Lucata.* Tale toponimo denominava una sorgente di acqua dolce posta nelle immediate vicinanze. Conosciuta anche come torre "Rizzo" dal nome del suo proprietario alla fine del XVI secolo, tale Francesco Rizzo (Arezzo) sciclitano. A partire dal tardo Settecento viene indicata anche come torre "Dammuso". Essa è poco distante dall'omonimo centro abitato e sorge su una collina, in posizione elevata rispetto al mare, anche se non sulla linea di costa.

Si tratta di una torre privata la cui esistenza è attestata da alcune fonti. Alla fine del XVI secolo, Camilliani ci fornisce le prime notizie e ne attribuisce la proprietà alla famiglia Rizzo, mentre Massa, nel 1709 più di un secolo dopo, certifica l'appartenenza al Collegio di Scicli. Alla fine del XVIII secolo, l'Amico afferma che la sua custodia è passata nelle mani dei gesuiti di Scicli.

Secondo l'opinione degli storici Mazzarelli e Zanca più che di torre si dovrebbe parlare di una costruzione rustica fortificata. Tale affermazione è motivata dal fatto che essa ha modeste capacità difensive, giustificate dall'esilità delle sue murature e dalla mancanza di apparati militari. L'esterno è caratterizzato dall'impiego di pietra viva con cantonali squadrati e cornici alle finestre. L'attico è interrotto a intervalli regolari con taglio del parapetto a gradinata. Il piano terra è coperto con varie volte a cupola fortemente ribassata da cui è probabile derivi il nome "dammuso". Il piano superiore è coperto a tetto, tanto da far pensare che tale sistemazione sembra aggiunta in un periodo molto posteriore alla prima costruzione del manufatto.

La costruzione si trova in un luogo strategico per la protezione delle coste, in quanto la posizione consente di dominare un'ampia visuale. Inoltre, essa si trova a ridosso di una fonte di acqua dolce, la cui vigilanza era altrettanto strategica ai fini della sicurezza delle coste. Tale vicinanza avrebbe permesso di sorvegliare l'eventuale avvicinarsi di imbarcazioni nemiche ed avrebbe permesso, di conseguenza, di avvisare dell'indesiderata presenza le torri vicine. Villabianca pone l'accento sul ruolo della sua posizione, dicendo che sorge tra le foci dei fiumi di Ragusa e di Scicli. Ad ovest comunicava infatti con la torre Mazzarelli, mentre a est non trova immediata corrispondenza. Secondo il progetto di Camilliani avrebbero dovuto erigersi nel litorale prima di Pozzallo ben cinque torri ma di queste solo la torre Samperi venne effettivamente realizzata. La scaletta in ferro, presente sulla terrazza di copertura lascia immaginare un suo ultimo utilizzo durante la seconda guerra mondiale che rimane comunque da verificare.

6. Torre Sanpieri

Prende il nome presumibilmente dalla punta di San Pietro o San Pieri, come viene definita nel testo del Camilliani. Oggi è del tutto scomparsa tanto che risulta estremamente difficile localizzare la sua

posizione. Secondo i pochi riferimenti bibliografici, sarebbe stata edificata sopra la punta di San Pietro, poco distante dal luogo dove oggi sorge il centro abitato di Marina di Modica.

Nella pur esiguità di notizie ricavabili dalla bibliografia, si è rintracciato un elemento che può testimoniare la sua esistenza. Agnello riferisce che il 17 giugno 1694 una flotta algerina composta da due feluche, tre navi ed una tartana riescì a catturare il guardiano di torre Sanpieri e sua moglie conducendoli in schiavitù ad Algeri. Camilliani propose di costruirla nel luogo dove sorgono le rovine di un antico edificio.

7. Torre Cabrera

La torre di Pozzallo ancora oggi è nota con il nome della famiglia iberica che, a partire da Bernardo Cabrera, signore della contea di Modica, ebbe un peso notevole nella vicende politiche siciliane del XV secolo. Essa si trova in pieno centro urbano in via delle Sirene fra piazza Madonnina, via Po e la costa. Si affaccia sul mare che ne lambisce i suoi estremi margini. Cartografia IGM: 276 II S. E. Pozzallo.

La bibliografia generalmente è concorde nello stabilire l'inizio del XV secolo come l'epoca alla quale far risalire la sua costruzione. Questa avvenne grazie all'iniziativa di Bernardo Cabrera, conte di Modica e membro di una delle più influenti famiglie del luogo. Venuta meno nel 1474 la discendenza maschile dei Cabrera, la contea e con essa la torre passarono nelle mani di Anna Cabrera moglie di Alfonso Enriquez. La torre, che Fazello definisce *ingens et magnifica*, ha subito nel corso dei secoli alcune trasformazioni, pur mantenendo integra la sua forma. Sotto Carlo V furono aggiunti rinforzi per sostenere le nuove e più pesanti artiglierie. A questo proposito, fu anche aggiunto un terrapieno dal lato mare. Nel 1693 subì gravi danni a causa del terremoto che colpì maggiormente la parte sud – orientale dell'isola. Gli Enriquez Cabrera, proprietari della torre, si fecero carico delle spese necessarie alle riparazioni. A causa dei danni subiti nel terremoto a metà del XVII secolo fu restaurata con l'accorpamento nella struttura di assi di ferro.

La torre Cabrera fu una torre di particolari, ovvero di proprietà di privati, il che comportava che la sua gestione e le sue spese di mantenimento nonché quelle dei soldati di guardia erano a carico di privati. Aveva buone artiglierie, era molto grande rispetto alle altre, tanto da meritarsi l'appellativo di "torrione" o "fortezza" in alcune fonti. Spannocchi riporta che la guarnigione di stanza all'interno era composta da un castellano e da quattro uomini alle sue dipendenze, pagati dal conte di Modica.

La massiccia costruzione parallelepipeda a pianta quasi quadrata di lati di m. 19.50 x m. 19.30 mostra una notevole uniformità nelle caratteristiche strutturali. Pochi sono i particolari aggiunti nel corso dei secoli che interrompono tale continuità. Tra questi, una piccola piattaforma semiaggettante all'angolo nord, due contrafforti di rinforzo sulla parte mediana del fronte mare e soprattutto un pesante bastione cinquecentesco scarpato eretto per supporto delle artiglierie. Si compone di tre piani con muri che hanno uno spessore medio di m. 2.30 e raggiunge un'altezza di oltre 30 metri. Tutti e tre i piani sono divisi in due vasti ambienti rettangolari da un muro longitudinale. La torre può contare anche su una cisterna e la volta del primo piano è a botte. Tutte le finestre del primo pano sono frutto di rimaneggiamenti posteriori mentre al piano terra sono presenti due finestrelle a feritoia probabilmente coeve alla torre. Con tutta probabilità il settore terminale deve aver subito una decapitazione che ha privato l'odierna forma della merlatura. All'epoca in cui fu edificata la torre doveva apparire isolata, in quanto circondata da un fossato, e snella dato che misura circa 30 metri di altezza. Oggi invece la mancanza di merlatura di coronamento e il bastione contribuiscono a darle un aspetto quasi tozzo rispetto al progetto originale.

La sua funzione era prevalentemente militare, a differenza delle più agili torri che la circondano. Essa era posta a difesa soprattutto dell'importante caricatore, già attivo nel XIV secolo, e capace di alcune migliaia di salme di grano. Non sembra avere corrispondenze in quanto le torri proposte dallo stesso Camilliani non furono mai edificate. Egli ne progettò due verso ponente e sei verso levante. A conferma dell'importanza strategica della posizione su cui sorge la torre di Pozzallo, anche l'ingegnere militare Tiburzio Spannocchi prevedeva la costruzione di tre torri a ponente e quattro a levante. La rilevanza strategica del luogo è costituita dall'essere un punto di passaggio obbligato per Malta, distante appena 60 miglia marittime, e l'Africa del nord. La proprietà attuale è pubblica ed il Comune di Pozzallo l'ha adibita ad uso museale.

8. Torre del Focallo

Pare prenda il nome dalla toponomastica e particolarmente dalla attigua località di Santa Maria del Ficallo. Si tratta di una torre oggi del tutto scomparsa, della quale ci sono poche tracce tra le fonti di epoca moderna. Pare sorgesse nei pressi delle rovine di un antico tempio e adiacente alla chiesa di Santa Maria del Focallo.

Tra le fonti, solo Filoteo degli Omodei parla di questa torre fondata sopra le rovine di un gran tempio. Da un primo esame, sembra che gli autori di epoca posteriore a Filoteo prendano per buone le sue affermazioni e riportino pedissequamente i suoi enunciati. Nel 1578, nel corso della sua ricognizione per le coste siciliane, Spannocchi non ne fa accenno, anzi afferma che sarebbe necessario costruire una torre in quei pressi. Camilliani qualche anno più tardi fa accenno soltanto alla chiesetta e alle rovine del tempio e auspica parimenti la costruzione di un presidio.

La sua erezione ha un senso in quanto vigilerebbe sul sito, nel quale, tra l'altro, pare essere stata presente una fontana di acque dolci.

9. Torre delle Formiche

Anche in questo caso la toponomastica influenza la denominazione della costruzione, la quale deve il suo nome alla località di Punta delle Formiche. Le tracce della sua esistenza purtroppo non appaiono evidenti, quindi non è possibile identificare con certezza un luogo geografico. Comunque, si presume possa essere stata eretta presso la punta delle Formiche, tra la punta dei Sette Pantani e la spiaggia delle Concerie.

Camilliani, durante la sua ricognizione lungo le coste siciliane, progetta la costruzione di una torre in questo sito. La sua effettiva realizzazione pare verificata dall'analisi delle fonti, infatti altri autori del secolo XVIII, come Villabianca e Massa, ne parlano fornendo alcuni particolari architettonici. Da queste testimonianze si evince che doveva trattarsi di una torre snella e leggera, preposta a compiti di sorveglianza della costa e non difensivi. Nonostante tali scarne informazioni, non si è ancora riusciti ad individuare il luogo esatto del manufatto.

La sua costruzione era finalizzata alla custodia delle cale disabitate attorno a punta delle Formiche che potevano con facilità dare ricetto a corsari. La sua presenza avrebbe permesso di avvisare le altre torri litoranee del pericolo imminente.

10. Torre di Porto Palo

Prende il suo nome dal paese costiero di Portopalo. Oggi non più visibile, dovrebbe essere sorta nelle prossimità del porto dell'omonimo centro costiero. Molti fonti dell'epoca moderna, tra cui Villabinaca, affermano che tale porto è il sito dove avvenne il leggendario sbarco di Ulisse.

Oltre alla testimonianza di Camilliani, anche altri autori la censiscono dando prova della sua effettiva costruzione. L'ingegnere militare propose la sua edificazione in modo che essa potesse porgere gli avvisi dall'una e dall'altra parte della riviera. Nel Settecento Massa, Amico e Villabianca la situano a ridosso del porto di Palo e gli storici Mazzarella e Zanca rintracciano dei documenti d'archivio che parlano di una torre di Portopalo confiscata dalla regia Deputazione alla casa Terranova nel 1813, anno nel quale già versava in pessime condizioni ed era bisognosa di riparazioni, pena la rovina.

In base alle scarne e vaghe informazioni di cui si dispone non si è in grado di fornire una descrizione seppur parziale ed indiretta del manufatto.

La necessità di sorvegliare la riviera e fare le segnalazioni alle torri vicine rappresentò di certo un incentivo alla sua costruzione, in quanto il sito rivestiva una notevole importanza strategica per il transito obbligato delle imbarcazioni nelle rotte che portavano in direzione sud.

11. Forte di Capo Passero

Questa struttura prende il nome dalla località su cui sorge. Curioso che all'epoca delle sue prime rappresentazioni (Spannocchi, Camilliani, Negro e altri) l'isola di Capo Passero si presentava come una penisola. La costruzione si trova all'interno dell'omonima isola.

La realizzazione dell'attuale forte fu suggerita da Camilliani e fu messa in pratica inglobando strutture preesistenti di cui si hanno alcune testimonianze documentali. Già nella prima metà del XVI secolo, all'antica torre segnaletica medievale si volle aggiungere una valida costruzione militare che, oltre alla funzione di guardia, potesse svolgere attivamente un compito di difesa contro gli attacchi provenienti dal mare. Il forte subì un assalto da parte del corsaro Dragut che, con le forze di cui disponeva, riuscì a smantellarlo. La causa della ricostruzione venne perorata dal Senato di Noto, che tornò a renderlo operativo. Questo prese la forma attuale alla fine del XVI secolo, *like a vassel under sail to the south wind*, secondo le parole di un capitano inglese agli inizi dell'Ottocento. Alla sua realizzazione parteciparono finanziariamente, con loro contribuzioni, le città di Messina, Siracusa, Noto e Modica. Secondo le testimonianze di autori settecenteschi fu sempre munitissimo di artiglierie ed uomini.

Il forte ha una struttura planimetrica che pare possa essere ricondotta ai modelli progettuali di Camillo Camilliani. Le dimensioni sono dilatate rispetto agli esempi di torri finora presi in considerazione,

ma la pianta basamentale resta quadrata con i lati che misurano m. 28.50 x m. 28.80. La struttura è centrata su un ampio cortile anch'esso quadrato dove al piano terra si affacciano vari ambienti tra cui i magazzini, le stalle, la polveriera e una chiesa. Nel cortile al di sotto si trova la bocca di una capacissima cisterna. Al piano superiore supportato su quattro lati da mensoloni a triplo ordine trovano posto gli alloggi della guarnigione. Infine, sulla terrazza era impiantata l'artiglieria. Negli ultimi decenni, nell'angolo della terrazza rivolto a levante ha trovato posto un faro nautico. L'accesso al forte avveniva attraverso un ponte levatoio appoggiato a una scala esterna.

La struttura militare si pone in posizione strategica e, al tempo stesso, era progettata col chiaro intento di potersi opporre efficacemente con soldati e artiglierie a una minaccia proveniente dal mare. La sua posizione venne scelta per proteggere l'accesso alla costa orientale dell'isola.

12. Torre di Fano

Questa torre prende il nome quasi certamente dal servizio che essa era preposta a svolgere. Posta in alto su una collina che domina il mare doveva segnalare, ovvero fare *fano*, alle torri vicine per la presenza di un pericolo. Ciò che rimane della costruzione oggi è raggiungibile dalla strada provinciale Pachino – Porto Palo. Il rudere si trova al centro di una terrazza ripianata, da cui è possibile affacciarsi sul mare. Domina le marine sottostanti da Capo Passero fino a Marzamemi, godendo quindi di un'ottima visuale sulla costa sottostante.

Le fonti sono avare di notizie su questa torre. Curiosamente, quella più antica (1573) si riferisce a una prova di inefficienza di cui si macchiarono i suoi torreri durante un assalto di corsari turchi contro un'imbarcazione cristiana. Spannocchi, che ha modo di visitarla durante la sua ricognizione per le coste siciliane, insiste sul ruolo che essa doveva svolgere, avvantaggiata com'era dalla posizione, che le permetteva di scoprire molte miglia di costa. Si tratta di una torre di particolari e in merito alla data della sua costruzione, da alcune ipotesi, si può supporre che sia stata edificata alla metà del XV secolo.

Si può supporre che questa torre abbia svolto un ruolo attivo nella difesa della costa, in quanto era posta a protezione di una tonnara sottostante. In questo caso, quindi, le funzioni militari vanno aggiunte a quelle di avviso e di segnalazione.

13. Torre Marzamemi

Il suo nome è dovuto, anche in questo caso, alla toponomastica, in quanto doveva sorgere nelle immediate vicinanze dall'omonimo paese. Fino a oggi non è stata rinvenuta la torre, ma si ritiene sia sorta all'interno o nelle immediate vicinanze dell'odierno centro abitato.

Questa costruzione è citata da Fazello, quindi la sua esistenza si può attestare già nella prima metà del XVI secolo. Spannocchi e Camilliani, che visitano il sito a cavallo degli anni '80 del XVI secolo, non ne fanno menzione, anzi entrambi proposero di far erigere una torre della maggior grandezza. Mazzarella e Zanca spiegano questo silenzio con la possibilità che i due ingegneri militari ritenessero la torre esistente inutile alla difesa e di conseguenza non degna di essere menzionata. Autori posteriori come Massa fino a Smith, che scrive agli inizi del XIX secolo, la danno ancora esistente. Sembra molto probabile si debba trattare di una torre appartenuta a privati, di piccole dimensioni e dalla ridotta capacità difensiva.

Anche questa torre era a protezione di una grande tonnara che sorgeva nei paraggi. Aymard la descrive di nuovo attiva a metà del XVII secolo, mentre in quegli stessi anni essa riprende l'attività con un contratto d'affitto. Questo fatto può suggerire che, eccettuati alcuni anni di inutilità dal punto di vista difensivo, la sua fondazione sia di molto retrodatabile alle visite dei due ingegneri.

14. Torre Cittadella

Si può raggiungere dalla strada provinciale Pachino – Noto, nelle vicinanze di una necropoli.

Ha origine in tempi remoti, sembra si possa far risalire all'epoca di dominazione bizantina. L'influenza islamica sembra trasparire dai conci grossi rozzamente squadrati e dalle sue caratteristiche strutturali.

Resta oggi solo il piano terreno con porta d'ingresso a livello, sormontata da arcone a discarico a tutto sesto. L'interno ha pianta tripartita con il quadro centrale di m. 6.20 di lato e due absidi laterali ed una frontale più grande. Tutto l'impianto, nella sua forma attuale, fa pensare ad una basilichetta o ad un piccolo tempio votivo con copertura in volta a cupola ribassata. La piccola costruzione è inglobata in una proprietà privata ed è posta sulla sommità di un colle a circa 600 m. dal mare. Grazie alla sua posizione elevata è possibile scorgere il forte di Capo Passero e la torre Vendicari.

In grazia del sito su cui sorge, si può ritenere abbia avuto funzioni di collegamento visivo con le altre torri.

15. Torre di Vendicari

La torre sorge sulla punta nord del golfo di Vendicari, dal quale prende il nome. Il sito è raggiungibile dalla strada provinciale Pachino – Noto. Alcune fonti ritengono che nell'antichità il sito fu un antico porto fenicio e lo scalo della città di Maccari.

La costruzione presenta eterogenee caratteristiche strutturali tanto che, grazie a tale fatto, è ragionevole supporre a diversi momenti edificativi. È generalmente accettata dagli storici la tesi che vuole la costruzione di questa ad opera di Pietro d'Aragona, fratello di re Alfonso di Spagna, attorno al 1430. Secondo Agnello l'impianto del primo ordine della struttura è precedente di almeno un secolo e mezzo e risale quindi al periodo svevo. Sono infatti evidenti le analogie con altri manufatti coevi come Castel Maniace a Siracusa e il Castello di Enna. I lavori del periodo aragonese riguarderebbero quindi soltanto l'elevazione superiore e furono integrativi di un impianto preesistente. La torre subì in seguito altre trasformazioni. Tra il 1580 e il 1584 fu adattata alle necessità difensive dell'epoca. Spannocchi nel 1578 dispose che si compiessero lavori per munirla di una porta e di un rialzamento con costruzioni sopra la terrazza in modo da farla corrispondere con la torre di Stampace. Camilliani, pochi anni dopo, dispose di alzare i parapetti, pur dovendo riconoscere la sua robustezza. Questa caratteristica le consentì di sostenere il peso di qualunque tipo di artiglieria, posizionata sulla terrazza. Per quanto riguarda la proprietà e l'amministrazione si tratta di un'importante torre di Deputazione con soprintendenza affidata alternativamente ai giurati di Noto e ai privati, che la armarono in maniera diversa, a seconda dei periodi e della particolare congiuntura. In genere, le fu assegnata una guarnigione di quattro soldati e un cappellano. Nel corso dell'epoca moderna, molte sono le notizie che la riguardano e che si apprendono sui suoi torrari. Si va dai vari lavori di riparazione (ad esempio la cisterna che non teneva l'acqua nel 1594) e miglioramento (nel 1625 si sostituiscono le artiglierie) agli abusi commessi dai suoi occupanti. Ad esempio, mentre nel 1594 la torre risulta ingombra di tonnini, barili, sale ed altro, nel 1596 si parla esplicitamente di abusi relativi a traffici commerciali illeciti commessi dai torrari. Tali abusi culminano negli aspetti pittoreschi dei contrasti tra soldati e cappellani. Nel 1804 il cappellano chiese di abbandonare la cappellania perché era oggetto di un ricorso, non meglio precisato, presentato da un caporale e da un soldato. Secondo il manoscritto del 1717 conservato presso la biblioteca palermitana, il soprintendente in quel periodo era Carlo Todaro barone del Burgio, mentre il personale in servizio presso la torre constava di cinque persone (compreso il cappellano) e la dotazione di armi si componeva di «2 cannoni di ferro uno da 15 e l'altro da 5 e mezzo, 5 canne di archibugi, 1 mascolo di bronzo di rotoli 15, 1 campana di bronzo di rotoli 30, 49 palle di ferro per li cannoni, 44 palle inservibili, miccia rotoli 2 ½ e polvere cantara 3,54».

La robusta costruzione tutta in muratura a vista mostra i segni dei rimaneggiamenti subiti nel corso dei secoli. Le sue fondamenta poggiano in parte sulla spiaggia e in parte sul basso fondale del golfo, tra le cui acque si può scorgere un muro, forse l'accenno di un antico molo. All'interno della torre si scorgono le strutture trecentesche e in tutta la parte basamentale si vedono i grossi conci di marca aragonese. Le tracce cinquecentesche sono ancora oggi visibili nei resti del ponte levatoio e nella sopraelevazione della terrazza. La capacità di resistenza della torre era data innanzitutto dalla robustezza della struttura, le cui mura misurano fino a m. 3.15 di spessore. L'interno è diviso in due ambienti di forma rettangolare da un grande arco ogivale. Una finestra con forte strombatura di stampo svevo lascia filtrare solo sottili raggi di sole. Due scale immettono al piano superiore: quella originaria aragonese e l'altra cinquecentesca che rivela un forte contrasto stilistico con l'impianto generale della struttura. Infine, dalla grande terrazza di copertura pavimentata si può godere ottima visuale, particolare che ha giocato un ruolo fondamentale nella scelta del sito per edificarla.

Alla torre si sono affidati funzioni militari e di sorveglianza della costa pianeggiante, contornata da pantani e saline. Il compito a cui era delegata, con ogni probabilità, era quello della protezione dell'antico caricatoio dove dovevano affluire in abbondanza i prodotti del fertile entroterra come frumento, vino e formaggi. La commercializzazione di questi attraeva i corsari interessati alle sicure prede, che facilmente potevano essere fatte. Inoltre, secondo quando affermato dal Villabianca, era stata eretta presso la foce del fiume di Noto. Il luogo era anche sede di una tonnara che torna attiva a metà del XVII secolo. La torre corrispondeva a sud con il forte di Capo Passero e Marzamemi mentre a nord con la torre di Stampace, almeno ipoteticamente.

16. Torre Stampace

In questo caso l'origine del nome non è certa. Villabianca ipotizzò una correlazione tra questo e la sua supposta funzione. Infatti, la torre «tenendo lontano dalla spiaggia i nemici, rendea il luogo in seno alla pace». La torre è raggiungibile dalla strada che da Noto porta al lido omonimo, nei pressi della località che prende il nome dalla "Colonna Pizzuta" del V secolo a. C. La torre infatti si trova in prossimità delle rovine dell'antica città di Eloro. Essa posa su un poggio che gode di buona visuale sul mare sottostante, anche se in posizione appena ritirata. Dalla quota del terreno non è possibile scorgere Vendicari, ma è probabile che questa località si potesse vedere dal piano della terrazza. A tal proposito Camilliani riferisce che esiste «buona corrispondenza de' segnali de fumi e fuoghi con la torre di Vendicari».

Gli storici sono concordi nell'attribuire la costruzione della torre a Blasco Alagona, conte di Mistretta, nell'anno 1353. Villabianca, inoltre, ci dà notizia che alla fine del XVIII si poteva ancora leggere nelle mura lo stemma gentilizio della famiglia Alagona rilevato in marmo. Il XV secolo vide la torre al centro delle contese tra la città di Noto e quella di Avola, con l'intervento di Pietro d'Aragona teso a dirimere le controversie. Grazie alla relazione di Tiburzio Spannocchi si sa che essa versava già in cattive condizioni alla fine del XVI secolo e che, quindi, necessitava di alcuni ripari. L'ingegnere senese propose il «rifacimento di un baglio dove è rovinato e la riparazione del parapetto in cima». Tali lavori si rendevano necessari in quanto anche Camilliani affermava che al passaggio dell'armata nemica (presumibilmente nel 1552 al comando del corsaro Dragut) gli fu messo fuoco. Probabilmente proprio per la sua posizione strategica o per le modeste spese che necessitavano per restaurarla, non fu difficile farla ritornare in funzione. In forza di questa tesi, molti autori in seguito la descrissero perfettamente attiva. Alla fine del XIX secolo essa risulta ancora in piedi. Sembra essere fin dalla sua iniziale costruzione una torre privata di media grandezza. Secondo quanto disposto da Spannocchi, essa doveva avere un buon armamento e un congruo numero di uomini di servizio (almeno 4).

Stando al disegno di Tiburio Spannocchi, la torre era di forma cilindrica sormontata da un elegante coronamento merlato appoggiato su beccatelli. Oggi non rimangono altro che poche rovine che si possono facilmente individuare dalla presenza a terra di due mensoloni in tufo sagomato, resti delle caditoie. Le fondazioni probabilmente si appoggiavano su delle preesistenze greche. Si può immaginare che le pietre con cui era costruita la torre siano state reimpiegate nella costruzione di piccoli manufatti come alcune casette rustiche vicine.

Con ogni probabilità, la torre aveva l'incarico di difendere dagli attacchi dei corsari una tonnara attiva fin dai tempi antichi, la quale ha cessato la sua attività negli anni '50 del XX secolo. Era costruita, secondo quanto affermato da Massa, tra le foci del fiume Abiso e quello di Noto. La sua posizione strategica viene ulteriormente confermata, in quanto a ridosso dello sbocco a mare di corsi d'acqua che avrebbero potuto rifornire eventuali imbarcazioni corsare.

17. Torre Ognina

La denominazione in questo caso risulta incerta. Secondo alcuni il nome deriverebbe dall'omonimo porticciolo protetto dalla torre, mentre per Amico invece questo deriverebbe dall'antica denominazione di Capo Longo che Tolomeo attribuiva al promontorio. Per questo motivo era chiamata la torre di "Lignina" o "Longina". Raramente viene anche denominata torre di "Gargase". La torre è raggiungibile procedendo sulla litoranea Fontane Bianche – Siracusa.

Gli autori sono generalmente concordi nel ritenere che questa torre abbia avuto una funzione esclusivamente di avvistamento e di avviso alle torri vicine e che, quindi, risulti del tutto sprovvista di artiglierie. Nessuno di questi, inoltre, ne specifica la soprintendenza o la gestione. All'epoca delle visite di Spannocchi e Camilliani, alla fine del XVI secolo, appariva ai loro occhi quasi come fatiscente. Si può ritenere che in seguito ai loro consigli sia stata riparata e reintegrata nel sistema difensivo costiero. Autori settecenteschi, infatti, ci restituiscono un'immagine di piena funzionalità, descrivendola nei particolari architettonici ed esaltandone le capacità difensive. Anche dopo i lavori di adattamento proposti da Camilliani, sembra che le dimensioni della torre siano rimaste modeste. In particolare, si può ritenere che al di là dei lavori di rifacimento successivi essa sia stata eretta nel XV secolo, particolare deducibile dal suo impianto edificatorio.

Le condizioni attuali della torre si presentano molto disastrate. Restano in piedi circa tre quarti del perimetro murario. Ha forma cilindrica con circonferenza di base di circa m. 13.40 ed è costruita in pietra del luogo. All'interno, non presenta la cisterna che altre costruzioni vicine posseggono. L'accesso alla parte superiore è possibile grazie a una scaletta posticcia, mentre per l'attuale stato di conservazione non si scorgono residui di vani o finestre, in quanto si trova allo stato di rudere.

I resti della torre si vedono su di un alto poggio naturale che si erge su di una punta sporgente in mare. Proprio per la sua posizione gode di un'ampia vista sui tre lati, motivo per cui è presumibile che la sua edificazione sia servita soprattutto come punto di avvistamento e collegamento con altre torri litoranee. L'eventuale corrispondenza con le altre è oggi problematica in quanto è difficile avvistarne sia a nord che a sud. Spannocchi e Camilliani avevano previsto la costruzione di numerose torri sui due lati, ma non si può essere certi della loro realizzazione. Infine, secondo quanto affermato sia da Massa che da Villabianca si situa tra la foce del fiume Cassibile e il promontorio di Massa Oliveri. Era deputata anche al controllo dello sbocco a mare di tale corso d'acqua.

18. Torre Terraguzza

Con ogni probabilità, questa torre deve il suo nome dalla contrada omonima che è presente fino nelle carte più recenti, mentre invece non è possibile precisare esattamente il sito, dato che la torre non è stata ancora ritrovata. Possono aiutare a tal proposito, seppur con qualche approssimazione, le indicazioni di Spannocchi e Camilliani circa la sua posizione.

La torre è certamente anteriore alle visite dei due ingegneri militari che percorrono il periplo dell'isola a fine del XVI secolo. Entrambi ne parlano pur ritenendola di scarsa importanza. Camilliani in particolare ci riferisce che la torre «è inabitata e molto antica». Si può ipotizzare dunque che la costruzione sia avvenuta per volere di privati e in un periodo non altrimenti precisabile, ma comunque anteriore all'epoca dei cambiamenti in campo militare, avvenuti nel XVI secolo. In forza di queste osservazioni, Spannocchi la vede talmente inutile che propone la costruzione di altre torri nelle vicinanze, omettendo altre notizie sulla sua esistenza.

Le fonti non ci hanno fornito particolari architettonici tali da delineare una descrizione del manufatto.

Probabilmente, questa torre era posta a difesa della tonnara nell'ampio golfo definito della punta di Milocca e della penisola della Maddalena. In base alle informazioni possedute, si può dedurre che la sua funzione non sia stata militare, ma di avvistamento e di segnalazione.

19. Siracusa
Castel Maniace

Il castello pare prenda il nome dal generale bizantino Giorgio Maniace, che lo volle edificato nel 1038 proprio dove sembra sorgesse un antichissimo tempio dedicato a Giunone. Si trova all'estremità dell'isola di Ortigia che fino al XVIII secolo era penisola. Anticamente separava i due porti di Siracusa ed era difeso dalla città da un fossato, oggi colmato, in modo che il mare lo isolasse dall'abitato cittadino. Cartografia IGM: 274 II S. O. Siracusa.

Si apprende dalle lettere del re Federico I al *praepositus aedificiorum* Riccardo da Lentini nel 1239 che i lavori del castello erano in via di ultimazione. Si può ritenere da altre fonti che a metà del secolo i lavori fossero già terminati. È quindi coevo ai castelli di Augusta, Milazzo e Catania edificati sotto la direzione del Protomagistro regio, Riccardo da Lentini. I particolari elementi architettonici fanno pensare che il castello fosse destinato ad accogliere la corte regia al completo, nel momento in cui fosse stato necessario. Nel XIV secolo ospitò di frequente i membri della famiglia Aragona. Sono documentate notizie circa il fatto che fu spesso assediato da armate navali, proprio perché dislocato praticamente come un castello sul mare. Nel XVI secolo, divenuto troppo vulnerabile da parte delle artiglierie, venne cimato e difeso esternamente da nuove opere bastionate. Vennero inoltre demolite le mura superiori e fu definita la cinta esterna e la piazza d'armi. I lavori di rafforzamento vennero condotti dall'ingegnere bergamasco Ferramolino con il beneplacito dell'imperatore Carlo V. Nel 1618 il castellano del tempo Giovanni da Rocca Maldonato ottenne dal viceré Vigliena che il castello prendesse il nome di San Giacomo e le quattro torri dai santi Pietro, Caterina, Filippo e Lucia. Questa concessione venne incisa in lingua spagnola sopra un grande busto di Poseidone ritrovato secoli prima e, all'epoca, custodito nel castello, ma che oggi si può ammirare presso il Museo di Siracusa. Nel 1620 venne istituito il foro di guerra all'interno del castello che quindi divenne sede di un tribunale. Nello stesso anno si stabilì che la guarnigione dovesse essere composta da 20 soldati. Nella seconda metà del XVII secolo i lavori furono condotti dall'ingegnere olandese De Grünemberg per il fossato e la cinta muraria bastionata della città. Il terremoto del 1693 gli causò notevoli danni, ma un duro colpo gli fu inferto da un agente atmosferico: la notte del 5 novembre 1704 un fulmine fece esplodere la polveriera che era stata collocata all'interno. Tre ordini delle crociere furono distrutte dall'esplosione che fece scagliare lontano i massi. I soldati che morirono nell'esplosione furono 33. Successivamente vennero demolite le altre crociere e la torre di nord – ovest, detta della campana, perché

pericolanti. La ricostruzione riguardò le torri e le mura mentre a cielo scoperto rimasero le crociere crollate da cui vennero ricavati nuovi ambienti utilizzati come magazzini. La torre di nord – ovest fu trasformata in prigione. Le guerre napoleoniche ne ristabilirono l'efficienza militare. Furono costruite delle troniere all'interno dei bastioni per disporvi i cannoni in batteria. Nella punta sud – ovest nel 1838 venne edificata una caserma sotto il regno di Ferdinando II.

L'impianto strutturale poggia su una base perfettamente quadrata di circa 51 metri di lato, agli angoli della quale sorgono le quattro torri cilindriche orientate secondo i quattro punti cardinali. L'interno è vuoto a causa del crollo delle strutture precedentemente edificate, ma grazie alle notizie documentarie e alle tracce architettoniche è possibile ipotizzarne l'aspetto. L'intero impianto del castello è generato da una maglia modulare a graticola di 5 metri di lato, sostenuta all'interno da robuste colonne in blocchi di pietra sulle quali scaricano 24 volte a crociera costolonate. Sembra che il vano centrale non fosse coperto, probabilmente per rinforzare la luce che proveniva dalle finestre sui muri perimetrali. Le mura sono di considerevole spessore, in media di circa 4 metri, il quale unito alle tracce rimaste dell'imposta delle crociere sui muri interni, nonché lo spessore dei pilastri, fanno ipotizzare che il castello potesse sostenere una prima elevazione. Le mura perimetrali sono costituite da blocchi perfettamente squadrati ed accostati l'uno all'altro quasi senza sconnessure. Ai lati del timpano ogivale, le mensole sorreggevano bronzi greci rappresentanti degli arieti accovacciati. Uno di questi arieti è oggi custoditi dal Museo Nazionale di Palermo. Gli altri due bronzi sono al centro di una curiosa vicenda. Nel 1448 in seguito alla strage di nobili rivoltosi siracusani ad opera di Giovanni Ventimiglia, finirono in mano a quest'ultimo come ricompensa per la fedeltà mostrata alla Corte. Sembra che egli non se ne volesse disfare neanche da morto tanto che li destinò a ornamento del suo sepolcro. Confiscati i beni al suo erede Arrigo Ventimiglia questi pervennero alla reggia di Palermo da dove passarono al castello Steri. Infine, uno di essi fu fuso durante la rivoluzione del 1848 e l'altro donato da Vittorio Emanuele II al Museo Nazionale. Il complesso architettonico si è conservato nelle sue parti principali. La parte sveva è ben visibile anche se le successive modificazioni ne hanno alterato l'impianto iniziale. Oggi si giunge al castello svevo attraverso un ponte di pietra che sostituisce l'antico ponte levatoio, posto un tempo su un ampio fossato (largo circa 30 metri e largo 60) che separava l'edificio dall'isola di Ortigia. L'iconografia del castello è assolutamente unica e non soltanto per la Sicilia. La presenza dell'unico straordinario salone sorretto da colonne ha suggerito la teoria fantasiosa secondo la quale il Maniace sarebbe stata una moschea con la sua grande sala di preghiera. Molto più realistico pensare che i costruttori si siano ispirati per la realizzazione di questo monumento alle grandi sale e ai refettori dei complessi cistercensi. Circa l'utilizzazione del salone è stata recentemente avanzata un'interessante ipotesi. Secondo Maurici, questo venne realizzato nella sua forma finale per espresso ordine di Federico II che avrebbe tratto ispirazione da una miniatura contenuta nel *Liber ad honorem Augusti*. L'opera realizzata dal poeta Pietro da Eboli per il padre di Federico, Enrico VI, rappresenta un luogo fantastico caratterizzato da colonne e da 24 arcate a volta sotto ognuna delle quali è scritto il nome di una regione o di un regno posto sotto l'autorità imperiale. Vicino sgorga inoltre una sorgente d'acqua denominata come *fons Arethuse*, la celebre e mitica fonte siracusana. I versi del poema rappresentano un edificio ideale, simbolo del potere. Risulta estremamente suggestivo, anche se non può essere provato, che Federico II abbia voluto concretizzare questo sogno facendo costruire un castello proprio presso l'isola di Ortigia.

Dal mare la città di Siracusa era esclusivamente difesa dal castello. Parzialmente distrutto e restaurato più volte, il castello, nel corso del tempo, ha avuto diverse destinazioni urbanistiche. Dopo i primi secoli, in cui servì da presidio militare della città sul mare, i suoi usi furono diversi. Da caserma a carcere durante il periodo borbonico ha subito, negli ultimi anni, lunghi lavori di restauro.

20. Siracusa
Castel Marchetto

Questa costruzione è stata denominata anche Castel "Marieth" o "Marchetti". Sembra plausibile ritenere che esso prenda il nome dal castellano Berenguer Marchet che ricoprì tale carica nel 1326. Altre ipotesi, però, vogliono far risalire l'etimologia alla corruzione araba del termine *castrum maris*. Oggi si conoscono con un buon grado di precisione le coordinate del sito nel quale sorgeva, infatti, era ubicato sull'istmo a difesa della parte più profonda del porto piccolo o marmoreo. Precedentemente alla sua definitiva distruzione, il castello occupava un'area compresa tra l'attuale corso Umberto e via Malta, a cavallo tra le vie Maielli e Cairoli. In tali vicinanze esiste ancora oggi una stradina denominata "via del castello Marieth". Cartografia IGM: 274 II S. O. Siracusa.

Il suo impianto insisteva probabilmente sull'area dove era edificato il palazzo di Dionigi I. L'edificio, o quanto meno una grande torre posta a protezione della città, fu conquistata dagli arabi nel IX secolo, tanto che alcuni autori cinquecenteschi, come il Fazello, ritennero che l'edificio in questione fosse stato costruito dagli arabi. Alcuni secoli dopo, nel 1167, un terremoto distrusse un preesistente *castrum* forse di origine normanna. In epoca imprecisata, comunque posteriore al XII secolo, si iniziò la costruzione del nuovo castello Marchetto riutilizzando come materiale di fabbricazione probabilmente parte dei diruti edifici precedenti. Alla fine del XV secolo la torre angolare di NE venne ampliata in forma circolare e rinforzata per farne una torre di artiglieria. Nel 1542 un terremoto danneggiò gravemente il castello. Era previsto che questo dovesse essere integrato nella nuova cinta bastionata delle moderne fortificazioni che si stavano costruendo, ma la realizzazione non ebbe luogo probabilmente per le enormi spese necessarie al consolidamento dell'edificio. Si decise così di demolire definitivamente la struttura danneggiata dal sisma. Nel 1584, si vedeva ancora nel luogo dove svettava qualche anno prima il castello Marchetto un mucchio di macerie. Dall'inizio del XV secolo il castello ebbe anche un'altra destinazione, in quanto funzionò anche da carcere. Agli inizi del XVI secolo, il castello venne circondato da un terrapieno e attorno alla base della torre angolare di NE venne costruita una bassa torre tonda per l'artiglieria. Alla fine degli anni '30 del XVI secolo proseguirono i lavori di ammodernamento del castello con la costruzione di una cinta bastionata avanzata dalla città. Il terremoto del 1542 fece crollare le nuove fabbriche che rovinarono sul vecchio castello danneggiandolo fortemente. Fu solo allora che si prese la decisione di demolirlo completamente perché ormai inservibile e perché necessitava di una grossa somma da spendere per la sua sistemazione.

Il complesso è stato completamente demolito senza che si siano lasciate tracce apparenti né tantomeno strutture attualmente visibili. Si può comunque ricostruire dalle fonti un impianto planimetrico rettangolare di metri 60 x 40 con torri quadrate angolari e altre intermedie, a metà della cortina. Quasi certamente si trattò di un grande edificio che si sviluppò attorno a una corte centrale. Inoltre, è testimoniato l'uso di residenza reale; la regina Bianca infatti vi soggiornò diverse volte. La provvista di acqua potabile era garantita dall'antico acquedotto romano sotterraneo che è stato incidentalmente tagliato durante i lavori cinquecenteschi della costruzione della cinta bastionata e dello scavo dei fossati.

Il castello era posto all'ingresso della città bizantina e medievale ormai tutta all'interno della penisola di Ortigia. Eretto inoltre sul posto più stretto dell'istmo che collegava Ortigia con la terraferma, il castello aveva lateralmente due tratti di mura sino alla riva dei due porti in modo da sbarrare l'accesso alla città murata. Serviva all'occorrenza anche da privilegiato punto di osservazione delle attività commerciali e dell'ingresso nel porto piccolo di Siracusa.

21. Torre Targia

Alcune fonti antiche la chiamano anche "Targetta", probabilmente per distinguerla dalla località chiamata Targia. Massa afferma che nel luogo dove oggi sorge la torre esisteva al tempo dei saraceni il castello di Pentargia, disfatto dal conte Ruggero. Il sito è raggiungibile imboccando una stradina in direzione mare dalla strada statale 114 e dista qualche centinaio di metri dalla costa.

Gli autori di epoca moderna sono avari di notizie in merito alla fondazione della torre, ma un marmo presente su un fronte della torre permette di identificare il proprietario e l'anno di fondazione. Questa fu stata fondata grazie all'interessamento di Consalvo de Orobellis nel 1550. Questi apparteneva a una nobile famiglia spagnola stabilmente impiantatasi a Siracusa a partire dal XIV secolo.

Si tratta di una torre di media grandezza, infatti la piccola torre ha impianto volumetrico essenziale con pianta quadrata di metri 7.60 di lato e pareti appiombate. La porta di accesso si trova a pian terreno e ha quattro finestre centrali nelle pareti del primo piano. La terrazza era stata probabilmente coronata da merli oggi tuttavia scomparsi. Il manufatto si presenta dall'esterno in ottimo stato di conservazione, non avendo risentito dei numerosi terremoti che nei secoli hanno colpito la zona. Negli anni '70 è stata adibita a magazzino di strumenti per l'agricoltura da parte di privati.

La sua utilità va ricercata nel presidio degli interessi agricoli della zona, come punto di vedetta sul mare pronta ad avvisare la gente che popolava le campagne dell'imminente arrivo di un pericolo corsaro. Il fatto che sia stata edificata per iniziativa privata ci consente di avanzare l'ipotesi che la famiglia de Orobellis avesse forti interessi economici nella zona.

22. Torre Magnisi

Questa torre prende il nome dall'omonima penisola da cui guarda il mare. Con molta disinvoltura oggi gli abitanti di Priolo la chiamano "torre dei saraceni". Si erge sul punto più alto della penisola di Magnisi (l'antica Tapsos) ed è raggiungibile da Marina di Melilli per la litoranea.

Le fonti storiche anche in questo caso sono discordi, inoltre sono avare di notizie, non chiarendo del tutto l'anno di costruzione e le condizione di gestione della torre. All'epoca della compilazione dell'Atlante, nel 1640, Negro non fa menzione di alcun insediamento all'interno della penisola di Magnisi. Mazzarella e Zanca ritengono che la torre risalga alla seconda metà del XVII secolo. La sua data di fondazione, invece, viene collocata tra la fine del Cinquecento e la prima metà del Seicento, dallo storico siracusano Giuseppe Agnello.

Si presenta in stato di conservazione assolutamente perfetto. Nonostante il peso dei secoli, ha conservato intatto un aspetto maestoso e austero che suscita un immediato interesse artistico. La sua compatta massa architettonica sembra coniugare in modo mirabile la forma cilindrica e il materiale che la realizza, un'arenaria bianca, con la caratteristica di essere facilmente lavorata. Il diametro esterno della torre è di metri 13.70, quello interno di 8.50 mentre lo spessore dei muri è in media di metri 2.60 e sembra corrispondere a quello dei castelli svevi di Augusta e di Catania. È ovviamente a pianta circolare, con pianterreno e una prima elevazione da cui si accede al terrazzo. Il locale inferiore è immerso nel buio e diviso in due ambienti di cui uno occupato da un grande serbatoio d'acqua e l'altro adibito forse a deposito di materiali. Il piano superiore era destinato probabilmente all'alloggio dei soldati. Sul terrazzo, infine, erano collocati i materiali per le segnalazioni. In particolare, la concezione strutturale interna è stata concepita in modo da avere delle caratteristiche di assoluta originalità. Essa ha un fulcro su di una potente colonna centrale a fungo, posta a sostegno di una volta a botte costruita con mattoni di laterizio. Tale soluzione mira a non scaricare sulle pareti perimetrali l'intera spinta. La particolarità che rende unica nel suo genere questa torre è l'elemento architettonico interno, «la volta ad ombrello», di grande originalità e il cui impiego sinora non si è riscontrato in altre costruzioni militari della Sicilia. In questo modo, si sono potuti realizzare due ambienti ad anelli sovrapposti, comunicanti tra loro attraverso due botole servite solo da una scala retrattile. Questa soluzione era stata concepita in modo da isolare la parte superiore nelle evenienze di un attacco. Una di queste botole comunica con una cisterna di recente impianto a pareti dritte in evidente contrasto architettonico. Alcuni stravolgimenti alla sua struttura originaria furono provocati dalla Marina Militare Italiana la quale, durante l'ultimo conflitto mondiale, gli aveva restituito l'antica funzione di strategico punto di osservazione marittimo. Le aperture che si vedono oggi nel piano superiore, una ad ovest trasformata in porta di accesso e l'altra ad est, costituiscono un'innovazione apportata dalla Marina. Opera di quest'ultima è anche la massa di terra e i gradini che permettono di raggiungere il nuovo ingresso e forse anche la bassa e angusta apertura di accesso al piano inferiore, ricavata ad est della torre, che denuncia manomissioni nei conci di pietra. Questa ipotesi è maggiormente avvalorata dal fatto che le aperture nelle torri costiere per l'ingresso non sono mai dal lato mare, per non offrire al nemico un facile bersaglio.

Appare evidente la posizione strategica della torre che, posta sulla parte più alta della penisola, domina il golfo sottostante. La sua funzione di avvistamento e di raccordo con le altre torri costiere permetteva una rapida circolazione delle notizie riguardanti pericoli provenienti dal mare.

23. Torre del Fico

Nelle fonti viene indicata anche come la torre della "Fontana della Fico"o più semplicemente la "Fico". Si trova nel comune di Priolo, all'interno della recinzione degli stabilimenti Enichem. Cartografia IGM: 274 III NE Solarino.

La torre presentava sotto la porta di accesso lo stemma degli antichi proprietari scolpito l'anno 1688, ma si può dubitare che questa data corrisponda all'anno effettivo della sua fondazione. Piuttosto, è lecito ritenere che il sito che ospita questo manufatto sia lo stesso che vide la costruzione nel 1434 di una torre di vedetta costiera. Presso la Cancelleria dell'Archivio della corte di Aragona è conservata una concessione fatta a un tal Guglielmo Prestangelo di costruire una torre vicino al mare a difesa della piantagione di canne da zucchero che lo stesso ha intenzione di impiantare. Massa parla di una torre antica alla marina che serviva ai lavoratori dei campi. La torre oggi esistente potrebbe essere una ricostruzione tardo seicentesca di quella eretta con tutta probabilità nella prima metà del XV secolo.

Gli elementi architettonici coesistenti paiono confermare questa ipotesi, in quanto suggeriscono due momenti costruttivi differenti. Il piano inferiore, diverso dal primo piano, sembra preesistente a quest'ultimo che, nel settore del coronamento, presenta chiari richiami allo stile barocco. La torre appare in ottime condizioni statiche. La lapide che portava scritto la data e lo stemma dei marchesi Gargallo, antichi proprietari, visto da Agnello è stato nel frattempo vandalicamente asportata.

L'intento edificatorio appare chiaro, ovvero la protezione di interessi economici precisi. Dopo la parziale distruzione dovuta al terremoto del 1693 e la conseguente riedificazione si inseriva nella rete di torri costiere che, in questa zona, corrispondevano agevolmente le une con le altre.

24. Torre di San Cusimano

Esistono due ipotesi sull'origine del nome del manufatto. La prima propende per la vicinanza a una vicina chiesetta dedicata ai santi Cosma e Damiano, mentre la seconda la fa discendere dal fiume chiamato San Cusimano che sbocca a mare tra la foce del fiume Cantara e la fontana del Fico, nel litorale di Melilli. Come per altre costruzioni, anche in questo caso, non si è certi dell'ubicazione di questa torre. Probabilmente, si trova in prossimità del faro della punta di Giannalena, poco distante dagli scavi di Megara Hiblea. Si deve percorrere la strada statale 114 fino ad arrivare nella zona compresa tra il fiume Cantara e il vivaio di San Cusimano.

Sia Spannocchi che Camilliani, durante i loro sopralluoghi per le coste siciliane, rilevarono questa torre e la segnalarono come molto forte. Infatti tenendo conto dell'esistenza di questa, il primo dei due propose di costruirne un'altra soltanto alla Cantara, distante poco più di un miglio in direzione nord.

Dall'analisi dell'aspetto esteriore, si presenta in pietra viva con base scarpata e parte superiore mozzata. Si può supporre di far risalire la sua origine al XIV secolo, in base all'analisi strutturale. Tutti gli autori antichi la indicano come una torre robusta, forte e ben munita.

Molte fonti sono concordi nell'affermare che, oltre al controllo della costa antistante, la torre era posta a protezione di un trappeto che sorgeva nelle sue immediate vicinanze.

25. Torre Avalos

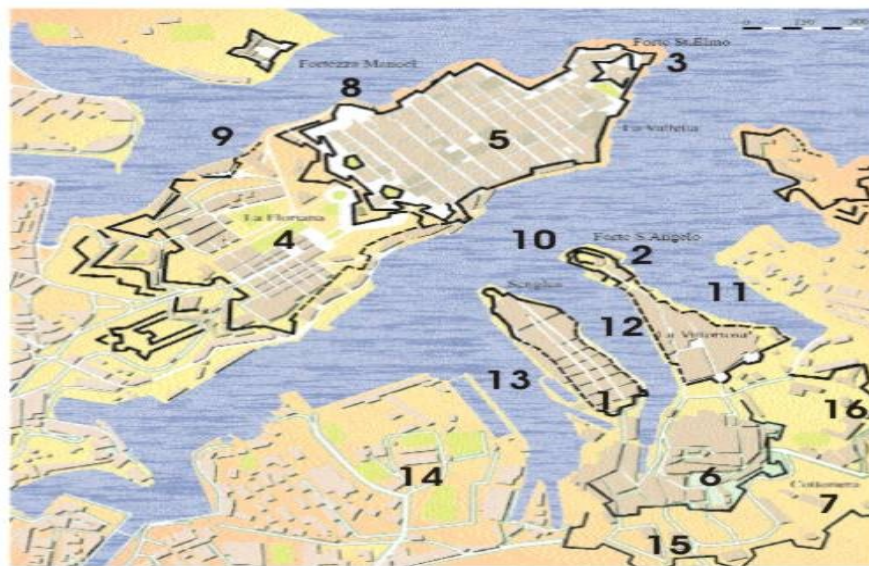
Nelle fonti viene anche menzionata come torre "Avolos" o di "Avola". Il suo nome ha origine dal nome del viceré che ne volle la costruzione, Ferdinando di Avalos, marchese di Pescara, viceré dal 1568 al 1571. Si trova in una zona di competenza della marina militare, al di là dell'estremità meridionale della città di Augusta, sopra un isolotto a poca distanza dall'estrema punta di Terravecchia.

Questa torre fu edificata verso il 1570 e come le altre fortificazioni fu testimone delle vicende della città. Ad esempio, durante gli anni della rivolta antispagnola, nella seconda metà del XVII secolo, rimase molto danneggiata nella battaglia navale vinta dalla flotta francese contro quella olandese e spagnola. Parte di responsabilità di questa sconfitta militare fu data poi al comandante della torre che, accusato di tradimento, fu impiccato pochi giorni dopo l'entrata dei francesi in città nel 1675. Altri gravi danni la torre li riportò in seguito al terremoto del 1693. Molti autori sono concordi nell'affermare che questa torre sia stata molto grande e ben munita sia di uomini che di artiglieria. Spannocchi, in particolare, ci riferisce che al tempo della sua visita poteva contare su una guarnigione di 12 soldati spagnoli, oltre al bombardiere, al castellano e al cappellano. Nessun testo fornisce precise notizie sulla proprietà della torre. Si può comunque escludere che appartenesse alla Deputazione, in quanto non figura nei vari elenchi ufficiali.

La torre presenta una particolare forma a ferro di cavallo con il lato posteriore che misura linearmente «canne 23», secondo quanto affermato da Ventimiglia nel 1640, mentre è circolare nella parte che guarda il mare. Sulla terrazza ha una spazio tanto capiente da poter manovrare senza intoppi l'artiglieria in dotazione. Le finestre delle mura che sono alte dal pelo dell'acqua circa «due canne e mezza» destarono la maggiore preoccupazione del Ventimiglia. Egli pensava che quando queste piccole feritoie fossero lasciate colpevolmente aperte la torre potesse essere conquistata con l'inganno. Per non togliere né la luce né l'aria alla guarnigione, egli propose di apportare una correzione, ovvero di mettere alle finestre delle grate di ferro.

Oltre a sorvegliare il braccio di mare tra la penisola di Augusta e il porto che si apre verso ponente, si può attestare un uso di segnalazione alla navigazione fino a tempi molto vicini. Molti autori antichi sono concordi nell'affermare che la torre ospitasse in cima un faro per sicurezza delle navi che entravano in porto. Mazzarelli e Zanca affermano che fino alla fine degli anni '70 la Marina militare avesse in custodia il faro che vi si accendeva sopra. Il presidio così numeroso, inoltre, fa supporre un'importante funzione militare in chiave difensiva della stessa città di Augusta antistante. Si può ritenere che la torre abbia svolto la duplice funzione di faro e di avamposto militare munito di cannoni.

MALTA

Nella stesura di queste schede si è scelto di seguire un ordine cronologico, come criterio per rappresentare le modificazioni subite dal territorio identificabile con la zona del porto maltese. Si inizia, infatti, con il castel Sant'Angelo, prima residenza dei Cavalieri sull'isola e peraltro preesistente al loro arrivo, per giungere alle ultime fortificazioni, il Manoel e il Tignè, sulla riva settentrionale del porto.
Il complesso processo di costruzione delle fortificazioni abbracciò tutto il periodo di permanenza dei Cavalieri nell'isola e subì, nel corso dei secoli, un continuo riadattamento dei siti alle mutate esigenze del periodo.

Legenda:

1 Forte San Michele**;** **2** Forte Sant'Angelo; **3** Forte Sant'Elmo; **4** Fortificazioni della Floriana; **5** Città fortificata di La Valletta; **6** Linea fortificata della Fiorenzuola; **7** La Cottonera; **8** Forte Manoel; **9** Porto di Marsamuscetto; **10** Porto Grande; **11** Porto degli Inglesi; **12** Porto delle Galere; **13** Porto della Sanglea; **14** Alture del Corradino; **15** Alture di Santa Caterina; **16** Alture di San Giuliano

1. Forte Sant'Angelo (Birgu/Vittoriosa)
La costruzione prende il nome dalla penisola sulla quale sorge. Difende il vecchio borgo di pescatori che si affaccia sul mare. All'epoca della venuta dei Cavalieri, nel 1530, fu sede del Convento. La toponomastica del sito mutò dopo il grande assedio. Birgu cambiò nome in Vittoriosa, come segno tangibile della vittoria ottenuta sui turchi. Si erge sul lato del porto grande all'estremità della penisola che ospita il Borgo, l'odierna città di Vittoriosa.
Il sito dove sorge il forte Sant'Angelo è quello di più antica tradizione all'interno del sistema fortificato del porto. In epoca antica, si presume sia stata la sede di un tempio di Giunone depredato da Verre e posizionato da Cicerone in questi pressi. Era inoltre già sede di un forte di epoca saracena, che in seguito divenne residenza dei feudatari siciliani che avevano governato l'isola dall'epoca della conquista normanna fino all'arrivo dei Cavalieri. Questi ultimi lo elessero subito sede del loro Convento, dando inizio al contempo ai lavori di ristrutturazione. Tali opere furono affidate a partire dal 1535 all'ingegnere Nicolò de Flavari, già attivo e apprezzato a Rodi. A lui successe il collega Nicolò Belavanti, responsabile del riassetto a schema ortogonale di Birgu/Vittoriosa. Nel 1541, l'ingegnere militare Ferramolino da Bergamo, in visita all'isola maltese, dirisse i lavori di costruzione del cavaliere del castello per volere del Gran Maestro d'Homedes. L'anno seguente, lo stesso Ferramolino sovrintese alla costruzione del molo del porto verso Sant'Angelo. Merita interesse il fatto che il Sant'Angelo oggi è tornato all'Ordine di Malta. In base ad accordi internazionali stipulati nel 2001 tra la Repubblica di Malta e il Sovrano Ordine gerosolimitano, il forte è stato concesso per 99 anni ai Cavalieri con il godimento dell'extraterritorialità e con altri privilegi. Tra questi, la possibilità di mantenere all'interno del sito un piccolo corpo in uniforme per scopi di vigilanza e sicurezza e di far sventolare la bandiera dell'Ordine dalla sommità del castello.
Trattandosi della prima residenza dei Cavalieri ed essendo già sede di un preesistente forte di epoca saracena, ha subito numerosi interventi nel corso dei secoli che ne hanno parzialmente modificato l'aspetto esteriore. L'asprezza del suolo dal lato verso terra e il profondo fossato lo rendevano un potente baluardo. Il sistema bastionato che cingeva l'antico Borgo e nel quale il Sant'Angelo era integrato ha una lunghezza di circa 3 km.
Col passare dei secoli ha perduto l'importanza strategica che ebbe almeno inizialmente. All'epoca dell'insediamento dei Cavalieri era l'unica costruzione militare che fosse in grado di difendere l'accesso al porto grande a sud del sistema fortificato dei porti maltesi. Fino al suo trasferimento avvenuto nel 1571 a favore della nuova città La Valletta, il Convento aveva sede in questo forte. Mare e terra, galere e residenza venivano difesi quindi da questa costruzione. Dopo la definitiva edificazione del Sant'Elmo sulla punta dello Schiberras, perse la sua centralità a favore di quest'ultimo, ma rimase un essenziale baluardo della difesa del porto. Il fuoco incrociato del Sant'Elmo e dei suoi cannoni era capace di impedire l'accesso in porto di imbarcazioni non desiderate. La sua posizione rappresentò sempre un elemento di debolezza del sistema di difesa ideato per proteggere l'isola. Il fatto di trovarsi a poca distanza dal monte San Giuliano lo esponeva al bombardamento di un possibile assedio, qualora fosse stata conquistata quella posizione. Il suo abbandono a favore della città nuova, La Valletta, da parte dei Cavalieri fu dovuta certamente anche a tale circostanza. Solo dopo la costruzione della cinta bastionata, capace di inglobare anche le alture del monte, la Cottonera, alla fine del XVII secolo, lo pose definitivamente al riparo dai pericoli. Solo a partire dagli anni '80 del Seicento riacquistò definitivamente la sua centralità nel sistema fortificato maltese.

2. Forte San Michele (Sanglea)
Il forte prende il nome dalla penisola omonima. Difende l'abitato di Sanglea che a sua volta prende il nome dal Gran Maestro fra Claudio De La Sangle della Lingua di Francia che regnò tra il 1553 e il 1557. Fu questi a favorirne la costruzione del borgo e l'insediamento della popolazione. Il forte è posto sulla penisola di San Michele nella parte sud del porto grande. Tale promontorio è parallelo a quello sul quale sorge il forte Sant'Angelo e si trova riparato da questo perché più interno rispetto al mare aperto. Il forte originariamente poggiava su un'isola in quanto l'istmo, che collega l'odierno promontorio alla terraferma, è stato creato successivamente.
In base al rapporto realizzato da una commissione di quattro Cavalieri nel 1551, nominata dal Gran Maestro per indagare sullo stato delle fortificazioni isolane, venne proposta l'edificazione di un forte in questo sito. Per far fronte alle ingenti spese si ricorse a una speciale contribuzione delle commende sparse in tutto il continente europeo e a un donativo dei Cavalieri presenti a Malta e nei vari priorati. A dirigere le opere di costruzione venne chiamato il famoso ingegnere italiano Evangelista Menga. Questi aveva già progettato e presieduto ai lavori di costruzione del castello della Goletta e di quelli di Barletta e Mola di

Bari per conto di Carlo V. Il forte maltese venne realizzato nel giro di pochi anni e restò a presidiare una parte importante della riva meridionale del porto grande.
La costruzione si situa a poca distanza dal muro terrapienato sul punto più elevato del dosso della penisola. Ha ai fianchi due cortine anch'esse con terrapieno che terminano con due bastioni d'angolo. I muri di queste sono bagnate ad est dalle acque del porto delle galere e ad ovest da quelle del porto di Corradino. Questi sono alti e posseggono una loro controscarpa.
Ha avuto un ruolo importante nel sistema fortificato maltese. Oltre a proteggere con le sue mura la città di Sanglea, ha giocato un ruolo determinante nella difesa del porto delle galere, profonda insenatura tra le penisole Sant'Angelo e San Michele. Dalla punta di quest'ultima fino al Castel Sant'Angelo si tendeva una lunga catena (realizzata a Venezia negli anni '40 del Cinquecento) che impediva l'accesso alla rada. Anche in questo caso, vale il discorso fatto per il castel Sant'Angelo. Alle spalle del forte e alla sua sinistra all'interno del porto, infatti, si ergevano due rilievi montuosi, i monti di Santa Caterina e quelli di Corradino. Solo dopo la costruzione della Cottonera, nella seconda metà del XVII secolo, il sito riacquistò l'importanza strategica che aveva parzialmente perso colla migrazione dei Cavalieri alla Valletta. Recuperò importanza grazie al fatto di essere ormai garantito dal pericolo di un attacco proveniente dall'interno.

3. Forte Sant'Elmo
Fu chiamato in questo modo per ricordare una delle torri che proteggevano l'ingresso del porto di Rodi, isola sulla quale i Cavalieri avevano avuto la sovranità fino al 1523. Sorge all'estremità della penisola dello Schiberras che, protraendosi verso il mare, divide in due il Porto Grande (detto anche di Marsa Kebir) dal Porto di Marsamuscetto. È posto all'estremità della penisola e protegge il vertice orientale della città di La Valletta.
La sua progettazione risale all'epoca dell'insediamento dei Cavalieri a Malta. A più riprese si propose la sua edificazione, ma questa è stata più volte rimandata per vari motivi. Sembra che il primo a proporne l'edificazione, o quantomeno un bastione, sia stato l'ingegnere fiorentino Piccino nel 1533. Come afferma lo storico della Religione, Giacomo Bosio, nel 1541 Carlo V mandò in Sicilia il celebre ingegnere militare bergamasco Antonio Ferramolino, con l'incarico di soprintendere alla fortificazione delle coste del suo Regno. Giunto anche a Malta, questi affermò essere inutile qualunque spesa di denaro al forte Sant'Angelo. Era sua opinione edificare un forte in questo sito, che sarebbe stato a suo avviso condizione necessaria alla permanenza dell'Ordine sull'isola. Il Gran Maestro aragonese d'Homedes gli ordinò di concentrare la sua attenzione al forte Sant'Angelo, costruendo per sua difesa un cavaliere. Dopo la caduta del presidio tripolino si rese urgente, per la Religione, porre inizio a nuove opere di difesa. Nel settembre 1551 il Gran Maestro affidò a una commissione composta da 4 Cavalieri, tra cui l'esperto Priore di Capua Leone Strozzi, il compito di ispezionare l'isola. La relazione finale esposta proponeva, tra le altre misure, l'edificazione di un castello in questo sito. Venne chiamato a soprintendere i lavori l'ingegnere militare spagnolo Pietro Pardo nel 1552, già attivo in Sicilia. All'epoca del grande assedio, le opere di difesa previste dal progetto originario del forte non erano ancora state ultimate. Il rapporto prevedeva anche la costruzione di una città a monte del forte, l'odierna La Valletta. Il Consiglio si espresse favorevolmente sulla nuova costruzione, ma escluse l'edificazione della città che avrebbe svuotato le casse dell'Ordine e che non sarebbe stata fattibile nel poco tempo richiesto dai vertici della Religione. Dopo il grande assedio del 1565, i lavori di ricostruzione del semidistrutto forte vennero affidati all'ingegnere Francesco Laparelli, responsabile anche del piano per la nuova città voluta dal Gran Maestro Jean de La Vallette. L'ingegnere militare toscano avanzò numerose proposte per la realizzazione delle opere con disegni raccolti nel *Codex Laparelli* conservato a Cortona.
Nel corso del tempo ha subito notevoli trasformazioni. Dopo il disastroso assedio del 1565 venne di nuovo concepito e ricostruito secondo le moderne concezioni militari. Prima della sua parziale distruzione ad opera degli Ottomani era una fortino stellato a quattro punte che formavano altrettanti speroni orientati quasi verso i punti cardinali. Aveva alte muraglie che però non dominavano completamente il retroterra del promontorio dello Schiberras, cioè non erano alte quanto il piano del rilievo antistante. Erano comunque circa della stessa altezza del promontorio Santa Maria che si affaccia all'estremità del porto di Marsamuscetto, nel lato nord. Le mura di costruzione erano assai mediocri e non erano rinforzate da traverse interne. Era circondato da un fossato basso e profondo munito di robusta controscarpa, ma privo di casamatta dove alloggiare le artiglierie pesanti. Una scala ripidissima scavata nello scoglio e protetta da un muro a feritoie riuniva la posterla dell'angolo di fronte alla Marsa Kebir ad una scala di approdo delle imbarcazioni provenienti dal Borgo, località direttamente prospiciente attraversando verso sud il porto grande (detto di Marsa Kebir). La linea difendente del forte, ossia il tratto su cui erano disposte le artiglierie

pesanti e leggere, era lunga 800 metri. Dalla parte che guardava il mare era stato eretto un cavaliere sul quale si era posta una colubrina. Dopo l'assedio, il forte venne ricostruito secondo la sua forma originaria, ma fu arricchito da strutture che lo rendevano meno vulnerabile al fuoco delle nuove artiglierie. In quest'ottica, vanno visti i lavori che lo munirono di bastioni nel 1614. Nel 1681 dietro la proposta del De Grünemberg si diede avvio alla costruzione di tre bastioni di fronte al Sant'Elmo, secondo quanto aveva già suggerito Laparelli più di un secolo prima, nel 1566.
Come si è detto più volte, progettato prima dell'assedio e realizzato a più riprese, era posto a difesa del porto. La sua posizione strategica consentiva di regolare l'ingresso nei due porti (Marsamuscetto a nord e Porto Grande a sud) e controllare dal mare e difendere la città – fortezza maltese. Costituiva l'estremità sul mare del sistema difensivo integrato della Valletta che culminava all'estremo opposto della città con la cinta bastionata della Floriana. Le travagliate fasi della sua costruzione, e riedificazione dopo l'assedio, rifletterono la vulnerabilità del sito quando non fosse stata realizzata la città alle spalle.

4. Floriana (La Valletta)
Il sistema bastionato della Floriana prende il nome dall'architetto militare che l'ha progettato, Pietro Paolo Floriani, giunto nell'isola nel 1635 e attivo a partire da tale data. Sorge all'inizio della penisola dello Schiberras verso la terraferma ed è opposta al forte Sant'Elmo rispetto alla città di La Valletta.
Di fronte alla minaccia dell'ennesimo assalto Ottomano contro l'isola, papa Urbano VIII aveva inviato nell'isola l'ingegnere militare Floriani. Questi progettò e sovrintese alla costruzione della cinta bastionata di quella che fu nominata la Floriana, proprio in suo onore. Essa fu ultimata già nel 1636, anno in cui però i lavori vennero sospesi. Sotto il consiglio dell'ingegnere Marculano da Fiorenzuola, i fondi a disposizione del Tesoro dell'Ordine vennero dirottati alla costruzione della Margherita Lines, o Fiorenzuola come venne chiamata all'epoca della sua realizzazione. La cinta bastionata della nuova città fu ultimata ed incrementata a metà del XVII secolo nel sempre vivo timore di nuove incursioni. Nel quadro di una costante attenzione al pericolo di attacchi, un ruolo importante lo ebbero i Cavalieri della Lingua italiana, ai quali fu affidato il controllo del tratto delle mura sud della città. Essi avevano a disposizione anche un arsenale difeso dall'artiglieria posta su questo tratto di bastioni. Un ulteriore spunto sulla Floriana può essere offerto da un fatto curioso. Negli anni '20 del XVIII secolo il Gran Maestro Manoel de Vilhena istituì un ospizio per gli incurabili e una casa di riposo per i vecchi. Entrambe le istituzioni durarono fino all'occupazione dell'isola, avvenuta nel 1798 per mano dell'esercito napoleonico.
Si tratta di un sistema a baluardi che difende da terra la nuova città di La Valletta. L'accesso a questa è stato più volte riprogettato ed adattato alle nuove esigenze difensive. L'iniziale porta San Giorgio alla cui realizzazione soprintese il Laparelli nel 1566 venne sostituita dalla porta Reale nel 1632. I lavori questa volta vennero affidati alla supervisione dell'ingegnere militare maltese Tommaso Dingli. L'opera fu, infine, perfezionata con la realizzazione della cosiddetta "porta delle bombe" alla fine del XVII secolo. Quest'ultima subì un'ulteriore trasformazione in un sistema a due fornici nel 1721 e, negli stessi anni, isolata dalle mura grazie all'opera dell'ingegnere francese de Mondion. Inoltre, un ponte scavalcava il fossato intermedio alle due strutture in corrispondenza della porta della città e della via assiale che conduceva a valle al Sant'Elmo, l'odierna Repubblic Street.
La nuova opera avrebbe svolto la funzione di diga e contenimento da eventuali tiri di artiglieria provenienti da un'incursione terrestre. Con la sua realizzazione si sarebbe messa così in sicurezza la nuova città che veniva circondata da alti bastioni. Questi, allo stesso tempo, incorporavano ad un'estremità il Sant'Elmo e proteggevano l'abitato ai lati, culminando a ovest nella fortificazione appena descritta. Si può affermare che la costruzione della città nuova di La Valletta ebbe senso solo grazie alla realizzazione di questo manufatto che la assicurò dalle insidie provenienti dell'entroterra. La più innovativa delle proposte della commissione del 1551, la fondazione di una nuova città a monte del Sant'Elmo, poté avere effettivo compimento solo se protetta dal sistema della Floriana. Alla costruzione della città diedero il loro apporto, con le proposte, i migliori ingegneri militari dell'epoca, quali Antonio Quinsani, Bartolomeo Genga (attivo a Malta negli anni 1558 – 60), Baldassarre Lanci (nell'isola nel biennio 1562 – 64), Scipione Campi (che lascia un suo rapporto sulle fortificazioni dell'isola dopo la sua visita dell'aprile 1566) e il Cavaliere fra Gabrio Serbelloni, Priore d'Ungheria e già architetto militare di Filippo II. Invece, il piano disegnato dal maltese Girolamo Cassar (attivo in varie opere negli anni compresi tra il 1560 e il 1588) non venne del tutto accolto perché ritenuto toppo fastoso. Tutti questi progetti ebbero un'attuazione pressoché immediata in quanto la nuova città ebbe uno sviluppo impetuoso. Circa dieci anni dopo il tragico assedio, il Delegato Apostolico scriveva al papa Gregorio XIII che La Valletta aveva circa 2.000 fabbricati, divisi in blocchi da venti spaziosi viali rettilinei. Di questi otto percorrevano il centro abitato da nord – est verso sud – est e gli

altri dodici intersecavano i primi perpendicolarmente. Grazie alla progettazione di tale rete viaria si permetteva al vento di entrare liberamente in città per attenuare il caldo estivo. Il suo reticolato “a scacchiera” era inoltre dotato di ampi fossati sotterranei che costituivano un efficace sistema per il deposito dei rifiuti e per lo scarico delle acque fognarie. Uno dei primi provvedimenti adottati dal Gran Maestro Del Monte, successore del La Valletta, fu proprio la divisione della città in due settori distinti: il Collacchio e il fuori Collacchio. Al primo apparteneva la zona dove oggi sorgono tutti i palazzi legati alla vita dell’Ordine, quali il Palazzo Magistrale, gli Alberghi delle Lingue e la Castellania, mentre al secondo era destinato alla residenza della popolazione maltese. Lo stile architettonico della città si ispirò in origine alla Controriforma, essendo severo e orientato a criteri di estrema funzionalità, ma presto si trasformò in barocco grazie allo sviluppo dei decori delle principali costruzioni.

5. Fiorenzuola e Cottonera

Le fortificazioni Fiorenzuola prendono il nome dall’ingegnere Marculano da Fiorenzuola che le progettò negli anni ’30 del XVII secolo. Quelle della Cottonera, invece, prendono il nome dal Gran Maestro Nicola Cottoner (1663 – 80) della Lingua d’Aragona che le fece erigere a partire dal 1670. Uscendo fuori dalla porta del Salvatore di Vittoriosa e seguendo le mura e i bastioni in direzione Cospicua, si passa davanti al collegio di S. Edward e si prosegue fino alla porta di Zabbar. A questo punto ci si trova di fronte all’ingresso monumentale delle fortificazioni Cottoner dove è visibile il busto dell’omonimo Gran Maestro.
La realizzazione delle due linee fortificate seguì dinamiche interne alla progettualità dei vertici dell’Ordine. Questi ultimi si trovarono di fronte alla necessità di dover operare talvolta delle scelte che rispondessero a precise priorità. Il tempo, in primo luogo, e i capitali a disposizione furono criteri determinanti per tali decisioni. Come già detto, mentre la Floriana era in corso d’opera e i lavori erano ormai sul punto di definitiva realizzazione, l’ingegnere Marculano da Fiorenzuola convinse i vertici dell’Ordine a distogliere i fondi destinati all’ultimazione dei bastioni a monte della Valletta per alzare quelli a protezione delle città della costa meridionale del porto. Le sue argomentazioni facevano perno sul fatto che, se i nemici si fossero impadroniti delle alture a monte del porto grande, avrebbero avuto facilmente in mano le tre città e il controllo delle acque. Ciò che ne seguì fu la costruzione della Fiorenzuola che incorporò nel perimetro difensivo sia Cospicua che Santa Margherita. Erano stati previsti sei bastioni, ma se ne completarono solo tre nel giro di un anno. Gli altri tre furono ultimati molto tempo dopo, ovvero tra il 1716 e il 1736 sotto il regno del Gran Maestro de Vilhena. Questo instancabile promotore dell’ultimazione delle restanti fortificazioni necessarie a mettere in sicurezza il sistema del porto, fece erigere negli stessi anni anche il forte Manoel, sulla parte estrema della riva settentrionale del porto di Marsamuscetto.
La costruzione della Cottonera seguì da vicino il susseguirsi degli eventi storici internazionali. Dopo la caduta di Candia nel 1669, ultimo grande presidio mediterraneo cristiano in Levante, crebbe a Malta la preoccupazione per un imminente attacco turco. Le navi dei Cavalieri avevano giocato un ruolo decisivo nello scatenare la guerra, in quanto le loro galere di ritorno dal Levante, dove avevano depredato il galeone Gran Sultana, avevano sostato nell’isola veneziana, dando adito al Sultano di incolpare i Veneziani di prestare aiuto ai corsari cristiani. Inoltre, i vari Gran Maestri succedutisi si erano energicamente profusi, seppur con alterne vicende nel corso del ventennio, a prestare aiuto ai Veneziani, impegnati nel conflitto contro gli Ottomani. Tutto ciò li esponeva alle possibili ritorsioni, oltre alla già diffusa convinzione tra i vertici della Religione di essere frontiera cristiana in Mediterraneo. Gli Ottomani, dopo il 1669, erano indubbiamente più vicini e i Cavalieri avevano ragione di temere un’invasione. Ciò spiega la convocazione nell’isola dell’ingegnere militare di casa Savoia, il conte Maurizio Valperga. Il Gran Maestro, fra Nicolò Cottoner aragonese, nel 1670 lo chiamò col compito di progettare e presenziare alla realizzazione di un’opera che potesse mettere definitivamente in sicurezza la riva meridionale del porto grande. I lavori durarono fino al 1680 quando la nuova fortificazione iniziò a far parte attiva delle difese del sistema del porto. È curioso osservare, infine, che la struttura faraonica per il tempo non fu mai messa alla prova. Gli 8.000 uomini e i 1.500 pezzi di artiglieria posti sulle mura, come è noto, non spararono neanche un colpo nel 1798, contro le truppe napoleoniche che invasero l’isola.
Per ciò che concerne la Fiorenzuola (o Margherita Lines come viene chiamata oggi perché cinge le alture di Santa Margherita), si tratta di una cinta muraria composta da sei bastioni dei quali tre furono subito realizzati. La Cottonera, invece, consiste in un anello semicircolare chiuso da otto bastioni e due semibastioni. Tutti questi hanno le loro cortine e l’opera in totale ha una lunghezza di circa 5 chilometri. Per mancanza di fondi i rivellini, che dovevano proteggere ciascuna cortina, non vennero mai realizzati. Tra le due linee fortificate, la Fiorenzuola più interna e la Cottonera più esterna, si apre un vasto territorio

protetto capace di accogliere, nelle intenzioni del progetto originario, una popolazione di circa 40.000 persone con il loro relativo bestiame, in caso di assedio.
La cinta bastionata della Cottonera circonda e protegge le tre città di Bormola, Sanglea e Vittoriosa. La prima delle tre si trova a diretto contatto della linea difensiva, mentre le altre due vengono protette in modo indiretto da essa. Arrivando a lambire le asperità che le circondano e le dominano, quali sono il monte San Giuliano, di Santa Caterina e del Corradino, ha assicurato una valida difesa dall'interno ai tre centri abitati. Dopo la costruzione dei bastioni della Floriana, è l'opera di fortificazione che completa il quadro di quelle necessarie alla sicurezza del complesso sistema portuale maltese. Come la Floriana aveva assicurato la difesa dall'interno di Valletta, la Cottonera è posta a difesa dei centri abitati di maggiore interesse strategico. Da Sanglea e da Vittoriosa si dominano, tra l'altro, i bracci interni del porto grande. Infatti, questi centri garantivano l'accesso al porto delle galere ed erano importanti approdi qualora la Valletta fosse stata assediata. La sua opera, da lungo tempo progettata e successiva alla Fiorenzuola di alcuni decenni, rappresenta il culmine dell'attività edificatoria difensiva dell'isola. La realizzazione della Cottonera certamente contribuì ad attrarre consistenti nuclei di popolazione costiera da ogni parte del Mediterraneo cristiano. Ciò si deve al fatto che ha giocato un ruolo considerevole nel far maturare presso questa gente il mito di Malta come fortezza inespugnabile.

6. Forte Manoel
Prende il nome dall'omonimo Gran Maestro fra Antonio Manoel de Vlhena, della Lingua di Castiglia, che ha regnato nel periodo compreso tra 1722 e il 1736. Questo è posto all'estremità del promontorio di Santa Maria, dopo l'assedio ribattezzata punta di Dragut, sulla parte settentrionale del porto di Marsamuscetto, l'odierna Manoel Island.
Già nel 1680, all'epoca del suo soggiorno sull'isola, il Valperga ne propose la realizzazione, che venne poi accantonata. Questa fu realizzata in seguito al progetto dell'ingegnere militare francese Charles Francois de Mondion, del 1717. L'architetto suddito del Re Cristianissimo venne definito, in una lettera accompagnatoria, come uno dei più brillanti ingegneri che ha servito il suo Re oltre a essere stato allievo del Vauben. Egli giunse a Malta nel 1715 insieme al più celebre Jacob de Tignè e, alla partenza di quest'ultimo, assunse la direzione di diversi lavori programmati da entrambi. Il progetto, subito approvato dal Consiglio, venne iniziato dopo poco tempo dalla sua formulazione, ma i lavori furono ultimati solo nel decennio successivo. L'ingegnere francese che operò a Malta in diversi altri siti morì il giorno di Natale del 1733 e il suo corpo venne tumulato nella cappella del Forte da lui progettato. I lavori di costruzione si conclusero nel 1726. Il Gran Maestro castigliano che promosse la conclusione dei lavori fu lo stesso che diede l'avvio e portò a compimento alcune altre opere all'interno della città di La Valletta, come ad esempio, il famoso teatro Manoel fatto costruire nel 1731 e sito nell'odierna Old Theatre Street. Oggi il forte ospita lo Royal Malta Yacht Club.
Si tratta di una struttura a pianta quasi quadrata rafforzata da quattro bastioni d'angolo. Per la sua realizzazione Mondion si servì sistematicamente dei principi adottati da Vauben, circa il fronte bastionato. Si notano le colonne di grande dimensione e gli archi di forma ellittica che ricompaiono ad esempio nei Magazzini della Calcara, opera dello stesso ingegnere. Così come l'imponente figura del principale ingresso del Forte può essere comparato con quello di forma più cubica, ma egualmente maestoso del principale ingresso alla città Notabile, l'odierna Mdina. All'interno della costruzione è visibile un'elevata piazza d'armi cinta da una massiccia costruzione che la mette al riparo dagli attacchi. Il forte è la costruzione dove sono maggiormente visibili tutte le caratteristiche della moderna tecnologia militare dell'epoca.
Questa costruzione chiude l'accesso al porto settentrionale di Marsamuscetto in cooperazione con l'azione di vigilanza del Sant'Elmo. Posto in una posizione più interna rispetto a quest'ultimo ha di fronte i bastioni settentrionali di La Valletta in modo da proteggere anche la città da attacchi provenienti dal fianco nord. Solo alla fine del XVIII secolo, ormai al tramonto della sovranità dei Cavalieri sull'isola, venne costruito un secondo forte sulla riva settentrionale del porto di Marsamuscetto. Il forte Tignè progettato nel 1792 dall'ingegnere militare francese de Tuosand affiancherà il Manoel nella custodia di questo braccio di porto, ma non sarà mai impegnato nell'effettiva difesa dell'isola. Il tempo in cui resterà sotto la gestione dei Cavalieri sarà infatti molto breve, ovvero solo sei anni.

6

Marittime ex-voto paintings from Malta With Sicilian links

Frank Theuma

Introduction

The brief given for the present report was to:
a. carry out a survey of relevant *ex-voto* paintings to include a detailed written description and a photograph together with a transcription of any inscriptions on the painting;
b. carry out the necessary archival research to put the relevant *ex-voto* paintings in a historical context;
c. compile a report on the material collected which shall include the result of the survey and archival research.

The aim of this report is to carry out the above mentioned three aspects in relation to maritime *ex-voto* paintings that 'highlight the maritime and historic links between Sicily and Malta'. For the purpose of this exercise the maritime area surrounding Sicily, including the islands such as Stromboli in the Aeolian archipelago, Favignana in the Egadi archipelago, and Pantelleria, Lampedusa and Linosa in the south, together with the Gulf of Taranto, has been considered as a contingent sphere of Sicilian influence. *Ex-voti* relating incidents happening in these parts have therefore been included. (Map 1)

The Maltese archipelago is made up of three main islands, and is situated in the middle of the Mediterranean Sea just south of Sicily. Till early modern times Sicily always played the role of hinterland to the Maltese islands supplying them with much needed foodstuffs and other merchandise that had to be ferried across the sea[138]. This need to transfer goods created a seafaring element within the Maltese population that has been present and active throughout the islands' long history. Mariners were in contact with the sea as their source of living, and had to cope with all that it had to fling at them: be it turbulent weather conditions or attacks by sea borne bandits. Seafarers knew how helpless they were when facing peril at sea. They believed that their skill and experience were not enough to ensure a safe passage in rough weather. Thus when disaster threatened religion provided the main solace and a pivotal hope of survival. Besides prayer, people on board vessels, be they mariners or just passengers often made vows and promised to donate offerings if they came through unscathed. In Malta we find a variety of these maritime offerings spanning over a wide period of time, and donated to a variety

[138] D. Abulafia, 'Henry Count of Malta and his Mediterranean Activities: 1203-1230', in *Medieval Malta, Studies on Malta before the Knights,* ed. A.T. Luttrell, (London, 1975).

of churches and chapels which were considered as having exceptional miraculous powers. The offerings could be bits of sail or cordage belonging to the vessel, chains - symbols of slavery, and canon balls. However, the most popular offerings were paintings commissioned by the person or persons who had been miraculously saved from disaster. More than 400 such paintings, of which only 26 are relevant for the present purpose, relating to maritime incidents survive in more than 12 locations, while an unknown number of others must have surely perished.[139] These locations are churches, chapels, oratories and museums spread all over the Maltese islands. Most of these *ex-voto* paintings, also known as *tabelle*, were executed according to a loosely adhered to formula. The scene of impending disaster occupies centre stage while a holy Icon or Icons look on from the top part of the painting. Indeed the Icon is a crucial element in the whole painting. The icon represented the Virgin, a Holy Person or Christ himself whose intercession was sought and who miraculously granted safety since the suppliant lived to fulfil the vow made. In most instances one Icon sufficed but in others one sees that the suppliant prayed to two different holy persons or even to three. These would be called a duplex and triplex intercession respectively. Often but not always an inscription either in a scroll or, as was the case during the nineteenth century, in a ribbon at the bottom of the painting described the events briefly or in detail, while the *sigla V.F.G.A* 'Votum Fecit Gratiam Accepit' meaning 'Offering made grace received', is seen on most of the *ex-voto* offerings.[140] The artists who were commissioned to paint these *ex-voto tabelle* were known as *Madonnari*, as often the Icon was of Our Lady; however few of them signed their work.

These paintings although often done in an artistically naïve manner offer insight into a particular sphere of human suffering, and the suppliants reaction to the suffering within the sphere of the deep religiosity of the catholic religion. The need to give thanks led to the creation of this particular form of vernacular artistic expression embodied in the *tabella*. In his seminal study on maritime *ex-votos* from the Maltese islands, the Dutch anthropologist A.H.J. Prins argued that these paintings would make no sense to the outsider who views them merely as drawings and does not make an effort to perceive the communicative system of meaning to which they belong.[141] Such a system of meaning could be simplified as - 'disaster threatening, having faith, which leads to the making of the vow, which then leads to the fulfilment of the vow which would be the placing of the *ex-voto tabella* in the desired sanctuary'.[142]

The maritime *ex-voto* paintings have been the subject of study on a number of different occasions by various scholars. Prins analysed them from the anthropologist's point of view, while Joseph Muscat concentrates more on the spiritual and naval aspect. Muscat's expertise in all things maritime enables him to glean much from a detailed analysis of the paintings, and opens up a wealth of knowledge to the interested layman and scholar alike.[143] Isabelle Borg on the other hand delves into the matter from the art

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[139] A.H.J. Prins, *In Peril On The Sea Marine Votive Paintings in the Maltese Islands,* (Malta, 1989), ix.
[140] A. Cuschieri & J. Muscat, 'Maritime Votive Paintings in Maltese Churches' in *Melita Historica*, 10 (1989)2, 124.
[141] Prins, 9.
[142] Prins,11.
[143] J. Muscat, *Il-Kwadri Ex-Voto Marittimi Maltin,* (Malta, 2003).

historian's point of view. In Borg's words the aim of her study was to 'explore the connection between the Miraculous Image in religious art in Malta and the *ex-voto tabella*'.[144] Borg strongly believes that the *ex-voto tabelle* in Malta should also be studied within history of art rather than regarded solely as a social document.[145] In her work she categorised the *tabelle,* identified stylistic trends, and examined the influence which two particular madonnari Vincenzo and Michele Gonzi had on the genre.

Having said this, to date no formal catalogue of all the maritime *ex-voti* exists. This lacuna is filled albeit in an unofficial manner by Joseph Muscat's slide collection. Over a lifetime of work Muscat managed to photograph these paintings; his resulting collection will continue to serve as a record until the *tabelle* are formally catalogued and published.

The Sanctuaries

To use Prins's model, the sanctuaries are divided in two categories, those considered as major and those as lesser. The criterion for this distinction is the popularity which the sanctuary enjoyed with seafarers which is then translated into the amounts of maritime *ex-voto* paintings donated. Thus a big parish church will not be considered as a major sanctuary if it houses just one or two paintings, whereas a wayside chapel which houses a substantial number of *ex-voti* would be classified as major. Although Muscat lists more than 30 locations where maritime *ex-voti* can be found, for the present purpose only 8 locations, 7 in Malta and 1 in Gozo, are of interest, (map 2). From the collections housed in these 8 locations only 26 paintings are considered as relevant in highlighting some sort of maritime link between Malta and Sicily.

The locations of interest are as follows, the sanctuary of Our Lady at Mellieħa houses 7 paintings of interest, the sanctuary of Our Lady Tal-Ħerba in Birkirkara houses 8, the parish museum at Żabbar parish church has 5, the chapel of Our Lady tal-Ħniena in Qrendi, 2, while the chapel of Santu Kristu in Għaxaq, the chapel of Our Lady tal-Ħlas in Qormi and the Minsija chapel in San Ġwann each have 1. Of these Mellieħa, Birkirkara, Żabbar and Qrendi are considered as major shrines, while the rest as lesser. A comment has to be made about the *ex-voto* found in Gozo. Originally it was at the church of our Lady of Liesse in Valletta, also considered as a lesser shrine, but it found its way into private ownership. Presently it is housed at the Kelinu Grima maritime collection in the village of Nadur.

The *Ex-Voto* paintings

The last section of this report consists of a descriptive catalogue of the 26 paintings under consideration. Each painting is reproduced on a data sheet together with location, description and transcription of the inscription where such exists. An effort was made to retain the original spelling of the inscriptions. Words or letters in [ ] were inserted by the present author when deemed necessary for a correct understanding of the text. Illegible sections of the inscriptions are indicated by […]. In the following text paintings will be referred to by the page number of the individual data sheets. The colour bar at the top left

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[144] I. Borg, *The Miraculous Image and the Ex-Voto Tabella in Malta,* M.A. dissertation in History of Art, (Malta, 1994), 1 and I. Borg, *The Maritime Ex-Voto a culture of thanksgiving in Malta*, (Malta, 2005).
[145] Borg, iv.

side of each sheet corresponds to the colour location squares on Map 2, intended to facilitate the identification of the location of the particular *ex-voto*. A bibliographical note beneath each picture indicates if and where the actual painting has been published. Although some *ex-voti* are listed as unpublished it has to be remarked that Prins has published comments, if not the pictures, about the majority of the *tabelle*. These comments were referred to when in doubt or to confirm ideas about what one actually sees on the paintings. Due to various reasons it was not always possible to examine or indeed photograph the actual paintings on site. Joseph Muscat generously allowed me to make use of his slide collection and notes, and willingly endured my questioning on more than one occasion. Without his help this report would have been impossible to compile. Reference to Muscat's slide numbering is also made.

Although a detailed description is attached to each individual painting, some general observations, that will help to put the *tabelle* in context, need to be made at this point.

The incidents that the *tabelle* deal with are poignant ones, nothing less than a matter of life and death for those ensnared in them. Documentary evidence is however often absent as such incidents were also frequent and the norm in the life of the seafarer then. If one chose to live off the sea one knew that rough weather, peril and possibly death were all part of his daily bread. The best records of the incidents are the *tabelle* themselves. Of course exceptions exist when great naval actions, like the battle of Lepanto, were concerned.

However in our case most of the *tabelle* do not depict anything so dramatic but rather the routine and mundane activity of frequent crossings between the different ports. The purpose of these journeys was to transport merchandise, passengers or both. The only documentary trace left behind would be an entry in a shipping register where a customs clerk would usually note down the name and type of vessel, the name of the captain or *padrone* and more importantly the kind of cargo being transported.

Indeed the nineteenth century customs registers at the National Archives of Malta reveal a thriving commerce being carried out between different Sicilian ports and Malta on board numerous small vessels, similar to the ones depicted on the *tabelle.*

Of the 26 votive offerings under consideration only 5 are from the 18th century while 16 are from the 19th century. Although 5 of the paintings show no date, one can cautiously attempt dating some of them after a careful examination of the marine architecture of the vessels or the style of clothes portrayed. So for example the undated painting on sheet 21 could have been commissioned during the first half of the 17th century when two masted rather than single or triple masted galleys were the norm, whereas the clothes worn by the two persons kneeling in the foreground of painting 24 indicate a 19th century style of dress. The date of 27 November 1761 appears on sheet 17, one wonders if this could be a later addition.

As mentioned earlier a necessary part of the votive painting is the Icon or the holy picture painted as part of the scene and to whom the vow was made. Our Lady and Child, with or without a crown, figure in all the pieces except in one, sheet 22, which is totally devoid of an Icon. Seventeen offerings portray just the Madonna and Child. Six paintings portray a *duplex intercessio* and so show another Holy Person besides the Virgin. These

include a crucified Christ[146], Saint Roque[147], Holy Souls in Purgatory[148], Saint Louis[149], and Christ the Redeemer[150]. There is just one case of a *triplex intercessio*, where the Virgin is together with Saint Paul - who rarely makes an appearance - and Saint Genevieve, the latter could have been added because the vessel in question was called the S. Geneveva[151]. There is another case which shows an exceptional instance of four; the Madonna of Trapani, Our Lady and Child, Santa Rosalia and the Holy Souls in Purgatory are all watching the scene being enacted before their eyes[152] This has an especially Sicilian flavour since both the Madonna of Trapani and Santa Rosalia enjoy great cultic following in Sicily. The Madonna of Trapani also had a chapel in Lampedusa which was revered by seafarers. Indeed once a year the knights of the Order used to go to Lampedusa to collect any money offerings made and transport them to the Madonna's sanctuary in Trapani. Santa Rosalia seems to have also enjoyed the devotion of seafarers; an ex-voto model of a galley hanging in the saint's grotto sanctuary on Monte San Pellegrino bears witness to this. One has to add that the cults of Our Lady of Providence and Our Lady of the Light, were both imports from Sicily to Malta. Although no *tabelle* relevant to the present exercise are located at the two shrines, both enjoyed the devotion of Maltese mariners.

Although the cataclysmic representation of the incident in the painting itself is often enough to portray the series of miraculous events and the narrow escape from the jaws of death, it is often the case that the person making the offering felt the need to recount the events by having an inscription written. This of course provides a wealth of extra information often giving the name of the vessel, the name of the donor, the date and the name of the place were the incident occurred. In our case 19 out of the 26 paintings have an inscription which has been duly transcribed. The dangers recounted often have to do with the rough sea, twice however, in sheet 5 and sheet 10, the inscription reveals Calabrian bandits, who were still operating during the nineteenth century, as the source of a vessel's problems. Sheet 24 depicts another such attack although the lack of an inscription leaves one in the dark as to the details of the incident. Unfortunately at times the ravages of time have destroyed or rendered parts of the inscriptions illegible. One cannot be sure if the white box on sheet 17 indicates that the inscription faded away or that the Madonnaro never got round to writing it down.

Besides the inscription the *sigla* of thanksgiving, V.F.G.A, is present in 19 of the paintings.

Varied types of vessels are portrayed, all of them sail propelled. Besides the galleys of the eighteenth century the other vessels portrayed are mostly merchantman. The most common is the speronara that workhorse of the Maltese *padrone*, the brigantine, brig, barque, bombarda, balanza and a couple of unidentified crafts all make an appearance. During the eighteenth century one finds them flying the Order's flag whereas during the nineteenth century on the coming of the British the Maltese vessels start flying the

[146] Sheet 11.
[147] Sheet 16.
[148] Sheets 17, 20, 24.
[149] Sheet 21.
[150] Sheet 23.
[151] Sheet 4.
[152] Sheet 24.

English red merchant flag known as the red duster. In a couple of instances vessels are flying the white ensign which was the flag of the Royal Navy. This indicates that they somehow were attached to the British Navy. Maltese vessels are often referred to as English.
As the *ex-voto tabelle* were the fulfilment of a promise made it is of interest to know who made the offerings. In 11 instances it was offered by the captain and crew of the vessel whereas in 5 by the crew on their own. It could be that the captain made a separate vow. In 3 instances the vow was made by a passenger on board. In certain cases a crew made a vow and promised an *ex-voto* to two different sanctuaries as seems to be the case with sheet 7 and sheet 15 where an almost identical painting of the Brig Marietta is in two different locations describing the same events. Most of the *ex-voti* seem to be made by Maltese mariners on board Maltese vessels as indicated by the flags they fly, while the captain of a Raugsan vessel that ran into trouble 60 miles off capo Passero saw fit to deposit his *tabella* at the Mellieha sanctuary.

Conclusion
In conclusion one notes that the frequent life threatening situations which the Maltese seafarer encountered when at sea gave rise to this vernacular artistic expression which was formulised and categorised within a framework of convention. The person prayed for safety and found it necessary to demonstrate gratitude publicly. Ultimately the *ex-voto tabella* was a public demonstration of thanks giving. In turn a particular chapel or sanctuary was enriched and increased in wealth and miraculous power the more *ex-voti* were donated as more miracles were granted.
The examples considered in this report not only demonstrate this but often strive to anchor the events in a known landscape or rather seascape. Attempts at drawing maps are made by the madonnari, easily recognizable landmarks, such as volcanoes, are drawn and topographical names of islands, ports, towns, capes and coasts are often given. It is possible that other certain landmarks which are difficult to identify and puzzling to the researcher nowadays, would have been instantly recognizable then. In our case the incidents occurred to shipping operating around Sicily, or to and from one of the islands within Sicily's sphere of influence. The variety of vessels, from the galleys of the Order to the small speronaras, to brigs, brigantines, and bombardas are often seen to run into storms around Pantelleria, Lampedusa, Linosa, Stromboli, Favignina, or Capo Passero. As if nature was not a great enough peril Calabrian bandits are also seen attacking shipping in the area right into the nineteenth century. Thus a religious offering of thanksgiving that results from narrowly escaped tragedy serves to further strengthen and demonstrate the link that has always existed between Sicily and Malta two islands of the middle sea.

Acknowledgments
My deepest thanks go to Professor A. Bonanno, Dr Nicholas C. Vella, Joseph Muscat, Lykke Lyngsø, Martin Attard and Chris Gemmell for their valuable help in different ways.

Glossary

Aft	Back end of a vessel.
Balanza *	A vessel common around Italian coasts and used mostly as a fishing boat. It was usually fitted with lateen sails, while a huge jib sail was a characteristic of this type of vessel.
Bombarda	A merchant vessel with the sail arrangement of a warship.
Bowsprit	A pole extending out from a vessel's prow, used to attach forestay(s).
Fore	Front end of a vessel, also the prow or bow.
Fore and aft sail	A sail whose normal position runs along the length of the vessel.
Fore mast	The mast nearest to the fore part of a boat.
Gaff	A pole attached to the top of the square gaff sail and attached to the mast.
Galley	The main vessel of the Order, it made use of large lateen sails and oars as a means of propulsion.
Jib	A small triangular sail attached to the fore stay.
Lateen sail	A large triangular sail whose top end is suspended from a pole called an antenna. The main type of sail on the Order's galleys.
Main mast	The mast in the middle or waist of a vessel, usually it is the tallest mast.
Mast	A pole that holds sails. All the ropes and sails connected to a particular mast will have the mast's name as part of their name, thus a stay attached to a fore mast will be a fore stay while a stay attached to a main mast will be called a main stay, and so on.
Mizzen mast	The mast nearest to the aft part of a vessel.
Oculo	A decoration in the shape of an eye found on the bow of a boat, intended as protection against the evil eye.
Rigging	All the masts, sails and ropes that together propel a sailing ship.
Spanker	A gaff rigged fore and aft sail hoisted on the mizzen mast.
Speronara	A small open boat that was very popular with the Maltese *padroni*. It takes its name from the beak like spur, or *sperone*, jutting out at the bows.
Sprit sail	A rectangular fore and aft sail held open by a sloping pole called a sprit that is attached to the mast and to the upper outer corner of the sail.
Stay	A rope that holds the mast from the front and back.
Waist	Middle part of a vessel.

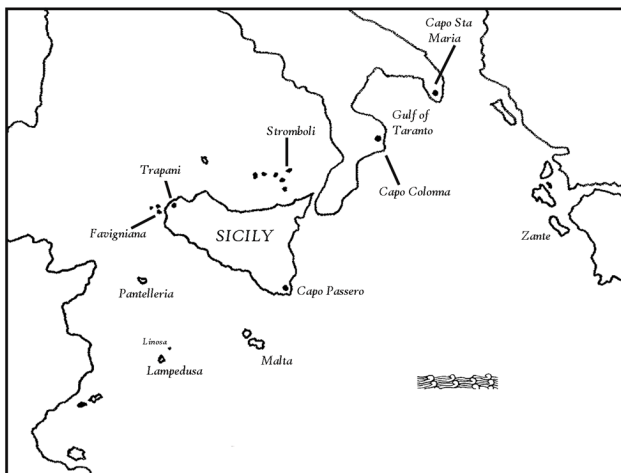
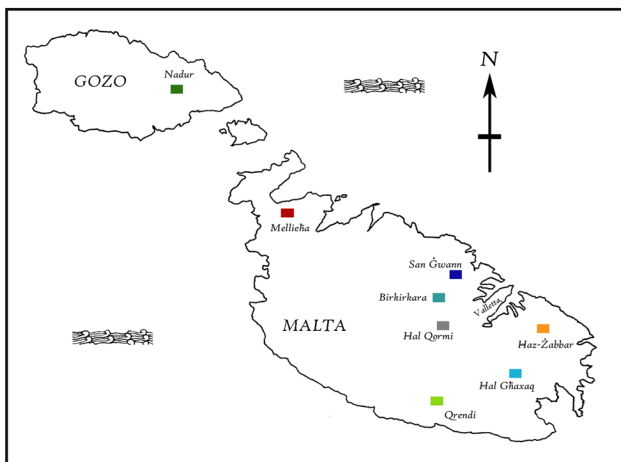
* For a good identification of the different vessel types in use, one should refer to Joseph Muscat's line drawings either in Prins 1989 or in Muscat 2003.

Capo Sta
Maria
Gulf of
Taranto
Stromboli
Trapani
Capo Colonna
Favigniana
SICILY
Zante
Pantelleria
Capo Passero
Linosa
Lampedusa
Malta

Map 1

GOZO
Nadur
N
Mellieħa
San Ġwann
Birkirkara
Valletta
MALTA
Ħal Qormi
Ħaż-Żabbar
Ħal Għaxaq
Qrendi

Map 2

F.T.

- Location: Mellieħa, Sanctuary of Our Lady.

- Description: Madonna and Child. A 38 x 26 cms panel offered by padron Giuseppe Diacono and crew of the speronara S. Francesco di Paola. The vessel is depicted sailing in a rough sea. Five members of the crew including the captain are attempting to repair the rudder broken at sea between Linosa and Lampedusa, three other persons are seen imploring the divine aid of the holy icon. The speronara is flying a jib and a foresail. The bow of the speronara is decorated with an *Oculo.*

- Inscription: *“Voto fatto alla B.V. della Mellieħa da Padron Giuseppe Diacono ed il suo equipaggio dalla spronara nominata S. Francesco Di Paola si e rotto il timone tra Linosa e Limpidosa il di 9 Decembre 1843. V.F.G.A.”*

Joseph Muscat slide collection 26.

Bibliographical references: A.H.J. Prins, *In Peril on the Sea, Marine Votive Paintings in the Maltese Islands,* (Malta, 1989), plate 24; J. Muscat, *Il-Kwadri Ex-Voto Marittimi Maltin,* (Malta, 2003), 42; I. Borg, *The Maritime Ex-Voto A Culture of Thanksgiving in* Malta, (Malta, 2005), title page.

- Location: Mellieħa, Sanctuary of Our Lady.

- Description: Madonna and Child. Panel offered by Giovanni Albanese who managed to survive drowning despite being unable to swim. The bombarda La Concezione is depicted breaking up in the rough sea. The vessel is flying the red duster on its main mast. The sails are in tatters and flying off in the wind while naked mariners can be seen in the sea attempting to swim to shore well visible in the background. Both the captain and crew survived.

- Inscription: *"Giovanni Albanese se ando a traverso nella spiaga di Amasa in Calabria li 13 Marzo 1800 e listesso non sapeva nadara* [nuotare] *la S[ant]a fede si obligeva di pregare alla S.S. V[ergin]e della Mellieħa subito la divina madre a dato la grazzia d'esser liberato senza verun danno con tutto l equipaggio la bombarda nominata La Concezione Cap[ita]no Gioseppe Panaioti. V.F.G.A."*

Joseph Muscat slide collection 43.

Bibliographical references: Unpublished.

- Location: Mellieħa, Sanctuary of Our Lady.
- Description: Crowned Madonna and Child. Panel offered by captain Antonio Semini of the Ragusan brigantine La Clorinda. The two masted brigantine was caught in a rough sea sixty miles off Capo Passero. All the sails are reefed except a jib and the Ragusan flag on the stern. The painting is initialled M. G. for Michele Gonzi.
- Inscription: *"Berghentino nom La Clorinda Cap. Antonio Semini Ragoseo li 24 Febraro1803 fuori Capo passaro miglie 60."*

Joseph Muscat slide collection 65.

Bibliographical references: Muscat, 96.

- Location: Mellieħa, Sanctuary of Our Lady.

- Description: Madonna and Child, S. Paul and S. Genevieve. A 40 x 26 cms panel offered by Salvatore Lotard passenger on the speronara S. Genveva. The speronara can be barely seen in the rough sea. A headland to the left runs down to a reef . A castle flying a Sicilian flag is depicted on the headland. On the right a curving coast line is shown. The painting is initialled V. G.

- Inscription: "*Voto promesso dal Sig. Salvatore Lotard essendo di passaggio con la spironara nom S[an]ta Genveva, si rtirovorono in un fortunale con grosso mare e vento di Gregale ancorati in fra l'Isola del Capopassero nella parte di dentro, che per il Miracolo Grande della B.V. che aguantarono bene, il capo e l'ancora perche se venissero mancante le dette, erano in un grande pericolo di andase inpunziando sopra il fragante delle secchi, li 20 settembre 1812, il Voto Fatto e la Grazia Avuta.*"

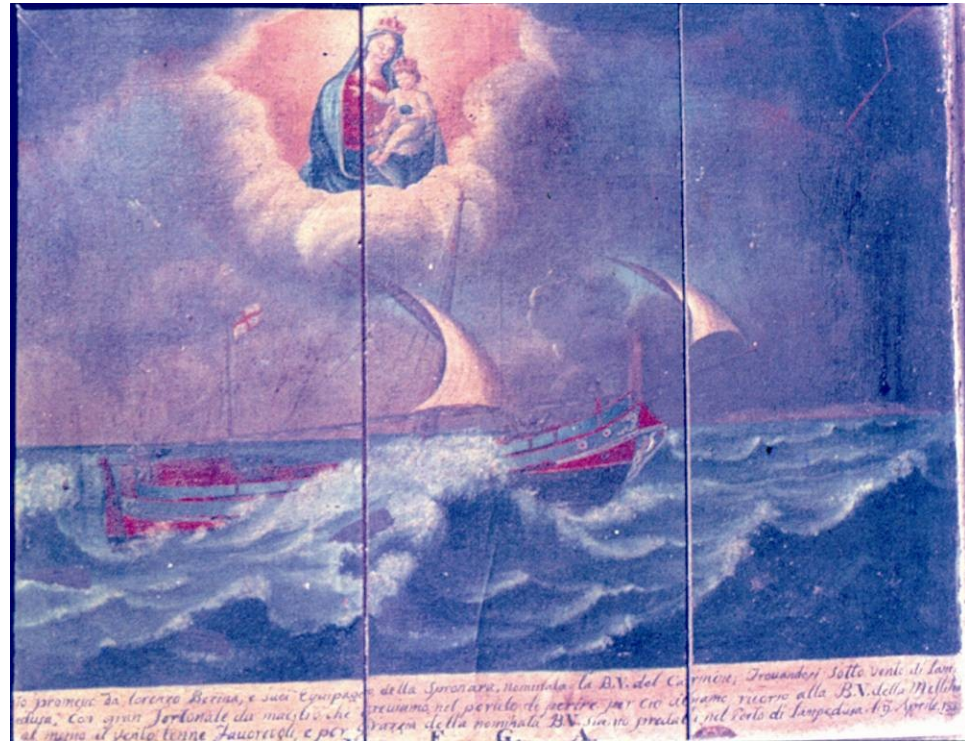
Joseph Muscat slide collection 58.

Bibliographical references: Prins, plate 16; Muscat, 240; Borg, 14.

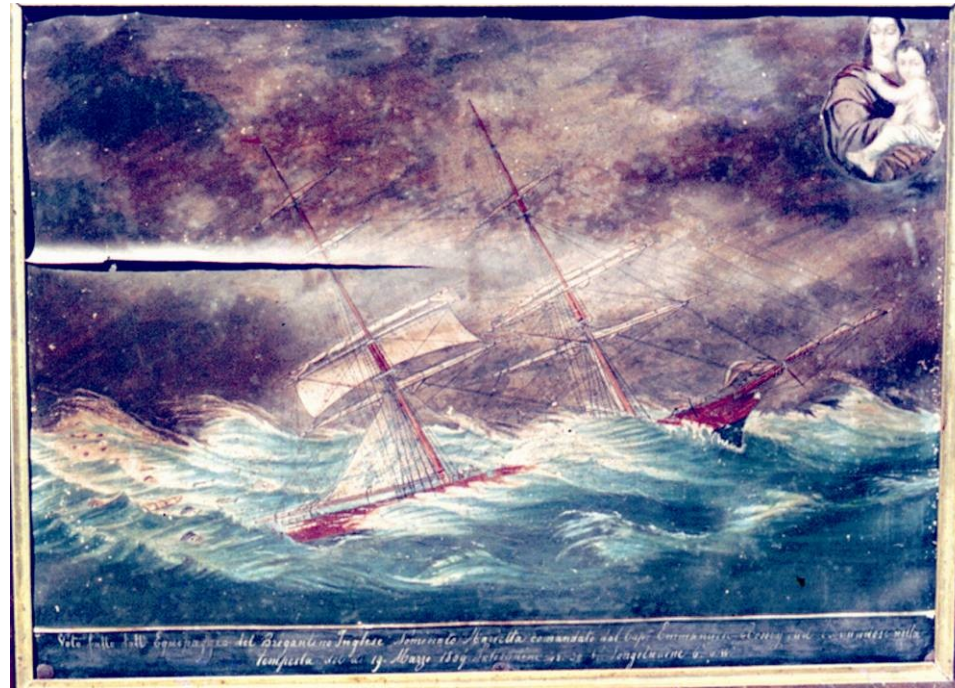
- Location: Mellieħa, Sanctuary of Our Lady.
- Description: Madonna and Child can be seen in the top left hand corner of the painting. A two masted balanza is depicted flying a jack and a lateen rig. In the foreground a strange looking Calabrian bandit vessel, with a high curving fore post and a sprit rig, is attacking the balanza. The Calabrian vessel has 15 oars in the water and is flying a white flag with an eagle on it. Stromboli can be see in the background.
- Inscription: *"La Balanza Maltesa era vicina di stromblo e contro la barcha furba Calabrese dove legati per gettano in mare pero per la intercesione di M.V. della Melliħa fu liberati. 1815. V.F.G.A."*

Joseph Muscat slide collection 35.

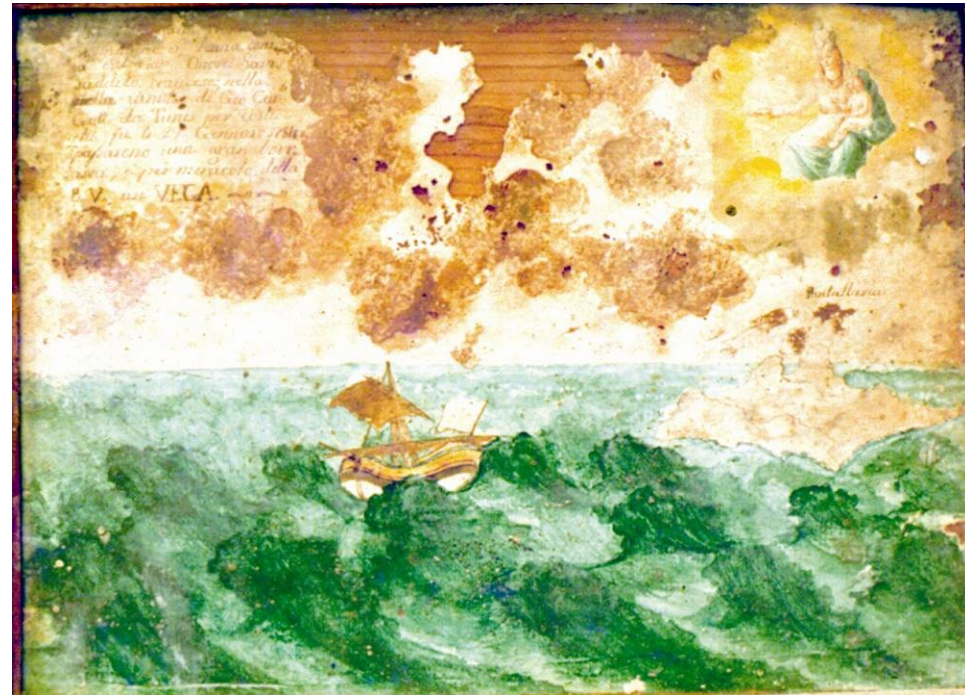
Bibliographical references: Muscat, 203.

- Location: Mellieħa, Sanctuary of Our Lady.
- Description: Crowned Madonna and Child. The panel was offered by Lorenzo Bezina and his crew of the speronara La B.V. del Carmine. Their speronara is depicted underway in a heavy sea near the island of Lampedusa. The vessel is flying a main lateen sail and a small jib. It is flying the white ensign. An *oculo* decorates the prow of the vessel. A low lying coast line is barely visible in the background. The panel is initialled V. G.
- Inscription: *"Voto promesso da Lorenzo Bezina e suoi equipaggio della Spronara nominata la B.V. del Carmine, trovandosi sotto vento di Lampedusa con gran fortanale da maestro che troviamo nel periclo di perire per cio abiamo ricaso alla B.V. della Mellieħa al […] il vento tenne favorevoli e per grazzia della nominata B.V. siamo prodati nel Porto di Lampedusa li 9 Aprile 1833. V.F.G.A."*

Joseph Muscat slide collection 33.

Bibliographical references: Unpublished.

- Location: Mellieħa, Sanctuary of Our Lady.
- Description: Madonna and Child looking over a brigantine making way in a rough sea. The painting is almost identical to another one at Tal-Ħerba Sanctuary which refers to the same incident and so could be a case where the crew made the vow to two different sanctuaries for extra help. [See sheet 15]
- Inscription: *"Voto fatto dall'Equipaggio del Bregantino Inglese nominato Marietta comandato dal Cap[ita]no Emanuele Rossignaud nella tempesta dell di 19 Marzo 1869 latitudine […] longitudine […]*

Joseph Muscat slide collection 54.

Bibliographical references: Unpublished.

- Location: Birkirkara, Sanctuary of Our Lady of Tal-Ħerba.
- Description: Madonna and Child. The picture is severely damaged showing a French vessel of unknown type in danger of getting shipwrecked on the shores of the island of Pantelleria.
- Inscription: *"[…] S. Anna com. Dal Cap. Onore Sairi […] suddito Francese nella […] di Gio. Car.do Call da Tunis per costi che fu li 29 Gennaro 1784 passarono una gran burrasca e per miracolo della B.V. V.F.G.A."*

Joseph Muscat slide collection 160.

Bibliographical references: Unpublished.

- Location: Birkirkara, Sanctuary of Our Lady of Tal-Ħerba.

- Description: Madonna and Child. A speronara can be seen in the rough sea, sailing with just a small sprit sail. Six crew members seem to be in distress while the captain is at the helm. A passenger can be seen under the awning, while the flag of the Order is flying in front of the awning. Stromboli can be clearly seen in the background.

- Inscription: None. *"V.F.G.A. 1789".*

Joseph Muscat slide collection 104.

Bibliographical references: Unpublished.

- Location: Birkirkara, Sanctuary of Our Lady of Tal-Ħerba.
- Description: Madonna and Child. A speronara depicted on a calm sea, the danger being human rather than natural. The sail is reefed and tied to the fore mast, while the crew is making use of oars to make way. Bandits can be seen threatening the speronara's crew with weapons, two other speronaras can be seen faintly in the background.
- Inscription: *"Voto promesso da Pad. Felice Agius e compagni essendo nella seccha di Sicilia furono assaltati da 8 sbanduti furono costretti di portarli sul collo abbordo contanta minacchia di darli la morte ed e con scopetti, con pistola, e con sciabole in mano doppo giorni 4 di navigazione fossi giunti in Calabria e li sono disbarcati li 8 luglio 1807 V.F.G.A.".*

Joseph Muscat slide collection 105.

Bibliographical references: Unpublished.

- Location: Birkirkara, Sanctuary of Our Lady of Tal-Ħerba.

- Description: Madonna and Child on the right hand side, Crucifix on the left. A bird's eye view of a bombarda in distress. The red duster can be seen flying from the mizzen mast. The main mast is split in two at the cross trees. The upper half is in the sea, the main sail and jib are open, one mariner is aloft on the yard while the others are praying. The event is seen as happening somewhere between Sicily, Zante and Malta. Sicily is marked by Etna the other two islands by their respective names.

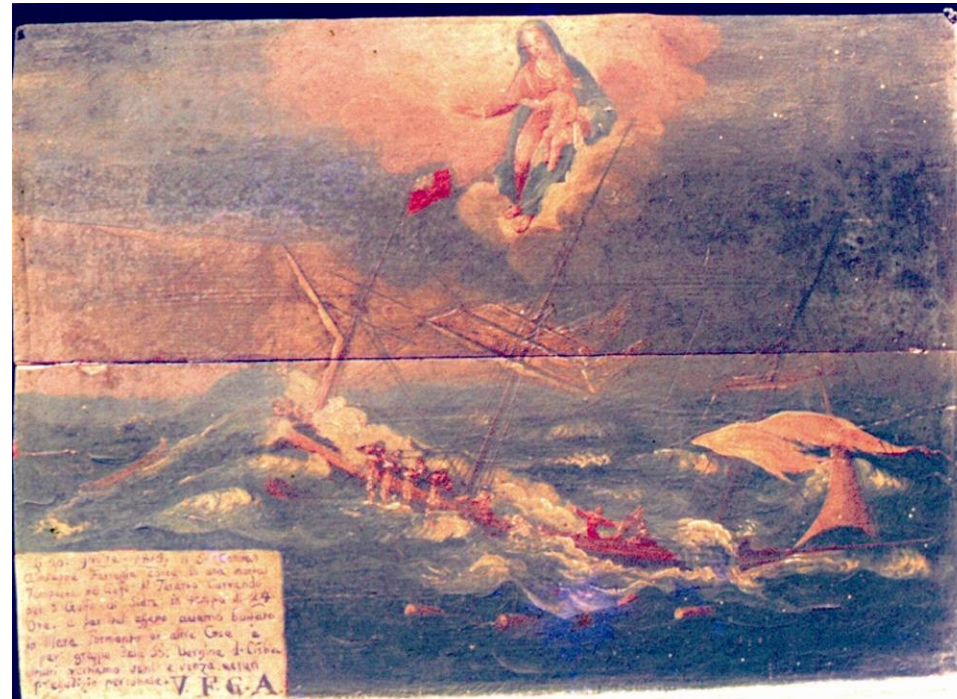
- Inscription: *"Voto fatto da com. Broncalli e suo equip. per esser stati in grandissimi temporali in Sicilia, canale di Malta e sopra Zante colla perdita per tre volte l'albero e carrigo e per grazia della B.V. sono stati dal detto liberi nel marzo 1815. V.F.G.A."*

Joseph Muscat slide collection 198.

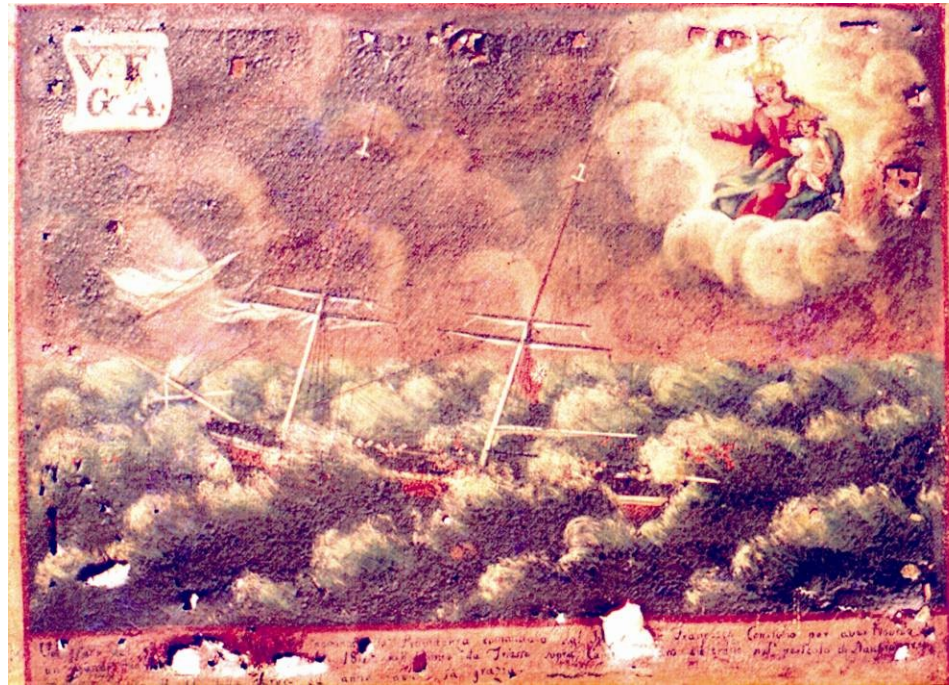
Bibliographical references: Muscat, 216.

- Location: Birkirkara, Sanctuary of Our Lady of Tal-Ħerba.

- Description: Madonna and Child. A three masted vessel in shown in distress in the gulf of Taranto. The crew are throwing cargo overboard to lighten the vessel and keep it afloat. A small boat is being towed behind the bigger vessel. The vessel which could be a barque is flying the red duster and a jib.

- Inscription: *“Li 20 Novembre 1815 il s. Capitan Gioseppe Farrugia corse in una mortal tempesta nel Golfo di Taranto correndo per il Golfo di Sidra in tempo di 24 ore e per tal effetto avemo buttato in mare formento et altre cose e per grazia della SS. Vergine d. Herba tutti restiamo sani e senza verun pregudizio personale. V.F.G.A.”*

Joseph Muscat slide collection 190.

Bibliographical references: Muscat, 215.

- Location: Birkirkara, Sanctuary of Our Lady of Tal-Ħerba.
- Description: Madonna and Child. This painting is severely damaged. The brig La Providenza can be seen in a heavy sea off Capo Passero with the sails in tatters flying off in the wind.
- Inscription: *“Voto fatto dall […] Brig nominato la Providenza com. dal […] Francesco Consiglio per aver trovato un 20 Feb. 1828 nella da Triaste sopra Capo Passero ed erono nel pericolo di naufragarsi […] B.V. dela Herba ed anno avuta la grazia. V.F.G.A.”*

Joseph Muscat slide collection 130.

Bibliographical references: Unpublished.

- Location: Birkirkara, Sanctuary of Our Lady of Tal-Ħerba.

- Description: Madonna and Child. The speronara S. Francesco is depicted sailing with all the sails reefed except for a small jib. The white ensign is flying near the stern of the boat while an *oculo* can be seen decorating the prow. Captain and crew made a vow to the Virgin and were saved. The painting is signed Vincenzo Gonzi.

- Inscription: "*Cap. Francesco Portelli e suo equip. della Spronara S. Francesco essendo nel Canale tra Malta e Lampedusa anno sofferto un gran fortunale da Libici e anno ricorso alla B.V. del Ħerba e furono prodati in Malta a salvamento […]nel giorno 27 Ottobre 1846.V.F.G.A.*"

Joseph Muscat slide collection 106.

Bibliographical references: Prins, plate 25, Borg, 24.

- Location: Birkirkara, Sanctuary of Our Lady of Tal-Ħerba.

- Description: Madonna and Child in top right hand corner. The painting depicts a brigantine being swamped by huge waves. All the sails are reefed except the top mizzen and a spanker. Debris can be seen floating behind the vessel.

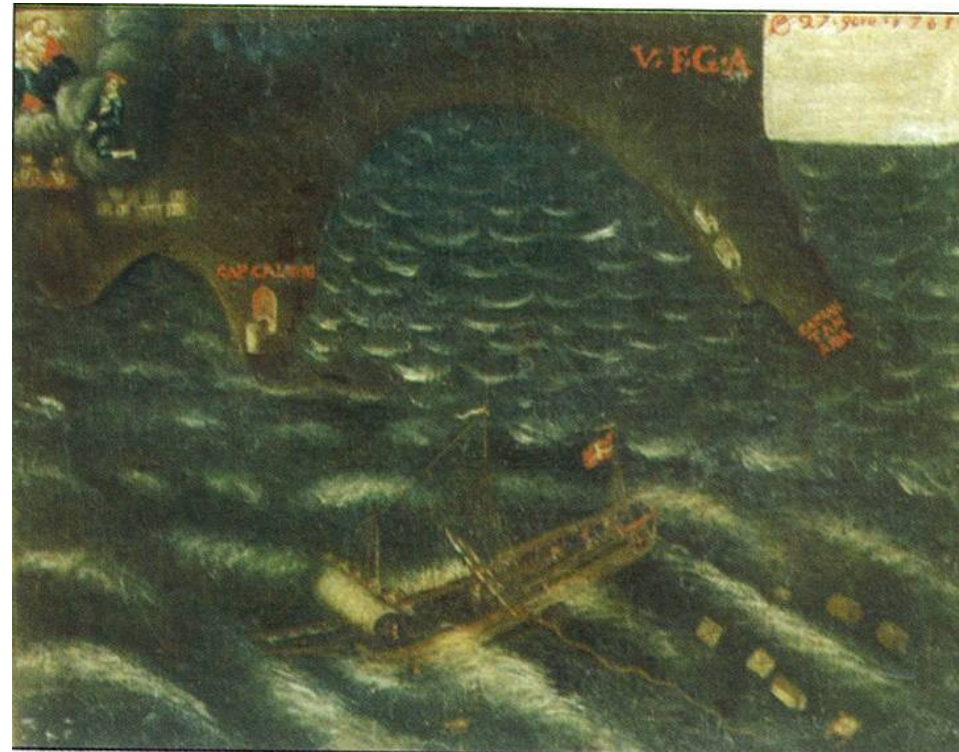
- Inscription: *"Voto fatto dal Equipaggio sul Brig[anti]no Maltese Marietta Cap[ita]no Emanuele Rossignaud trovandosi nelle vicinanze di Lampedosa nella tempesta del di 19 Marzo 1869."*

Bibliographical references: Prins, plate 26.

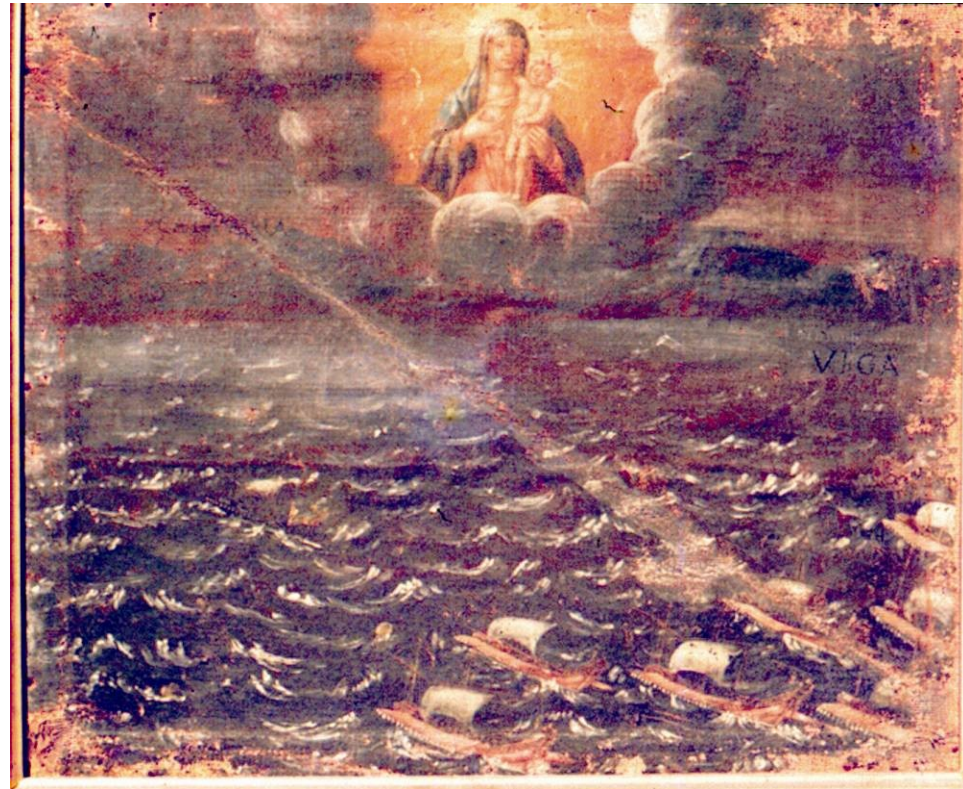
- Location: Żabbar, Sanctuary of Our Lady of Graces.
- Description: Madonna and Child and S. Roque. A bird's eye view of the galley saqudron. Six galleys can be seen with the capitana painted black, the four other galleys that can be seen in the distance could be the same squadron at a different point in time. The topogrphy shows the Favigniana channel with Trapani on the left and the island of Favigniana on the bottom of the picture.
- Inscription: *"Voto fatto delli volontari della galera S. Luigi per la gran tempesta nel canale della Favignana socesso a di 9, 10 […] della Mat. 8 Maggio all' anno 1745."*

Joseph Muscat slide collection 286.

Bibliographical references: Muscat, 82.

- Location: Żabbar, Sanctuary of Our Lady of Graces.
- Description: Madonna and Child, Holy Souls in Purgatory and an unidentifiable figure kneeling to the right of Our Lady. The painting shows a bird's eye view of the gulf of Taranto with its two major capes; capo Colonni and capo Santa Maria. The vessel in distress is a polacca sailing across capo Colonni, it is flying a foresail and the flag of the Order on the mizzen mast. Its crew is trying to keep it afloat in the storm by throwing its cargo overboard. Sailors are shown aloft on the yard.
- Inscription: The inscription seems to have faded away and a date "*27 November 1761*" could have been added later. "*V.F.G.A.*"

Photography: Nicholas C. Vella.

Bibliographical references: Muscat, illustrations, 70.

- Location: Żabbar, Sanctuary of Our Lady of Graces.
- Description: Madonna and Child appearing on illuminated clouds. The eight galleys of the Order are depicted in a rough sea, the black capitana is seen sailing ahead. All the galleys are using a treo or emergency square sail. A faint 'Calabria' can be seen marking the coastline in the background.
- Inscription: None. *"V.F.G.A."*

Joseph Muscat slide collection 303.

Bibliographical references: Unpublished.

- Location: Żabbar, Sanctuary of Our Lady of Graces.

- Description: Madonna and Child are seen sitting on a luminous cloud. The painting shows four galleys of the Order that on their return from Sicily were caught in rough weather off Marsaxlokk. The towers of Benghisa, S. Lucjan, ta' Zondadari, Xropp l-Ghagin and S. Tumas can all be seen on a beautifully drawn Marsaxlokk. The vow was made by one of the captains of the galleys.

- Inscription: *"Essendo di ritorno dalla Sicilia a Malta la squadra delle galere di questa Sacra Religione per insorta tempesta sotto il comando ILL. Eccl. mo Capitan Generale Fra' Luigi Frevllaij la galera San Luigi comandata dall'ILL. mo Sig. Capitano Gio. Filippo Maruscelli fece un voto alla Beatissima Vergine sotto titolo Della Gratia, alli 18 decembre 1790 V.F.G.A."*

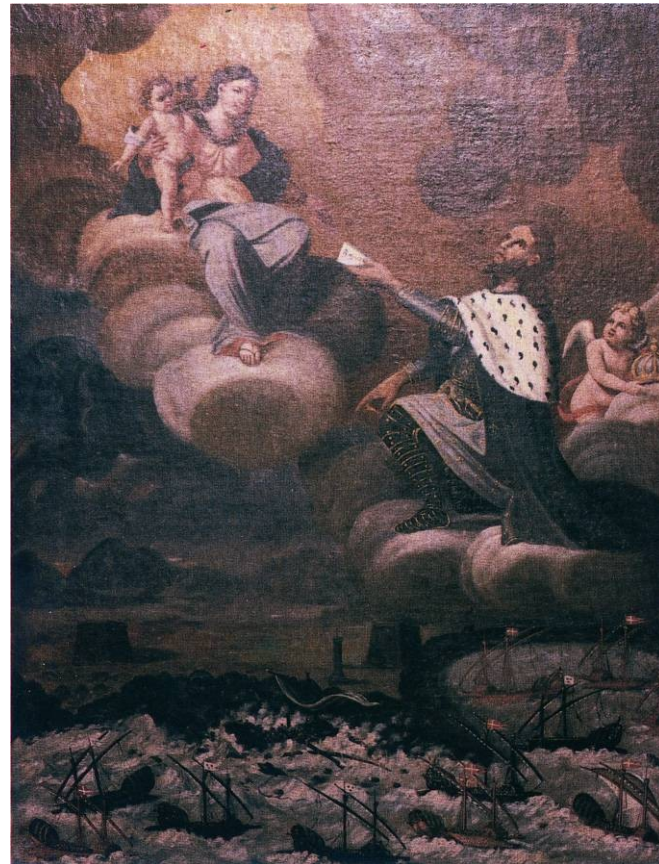
Photography: Nicholas C. Vella.

Bibliographical references: Prins, plate 1; Muscat, 123; Borg, 16.

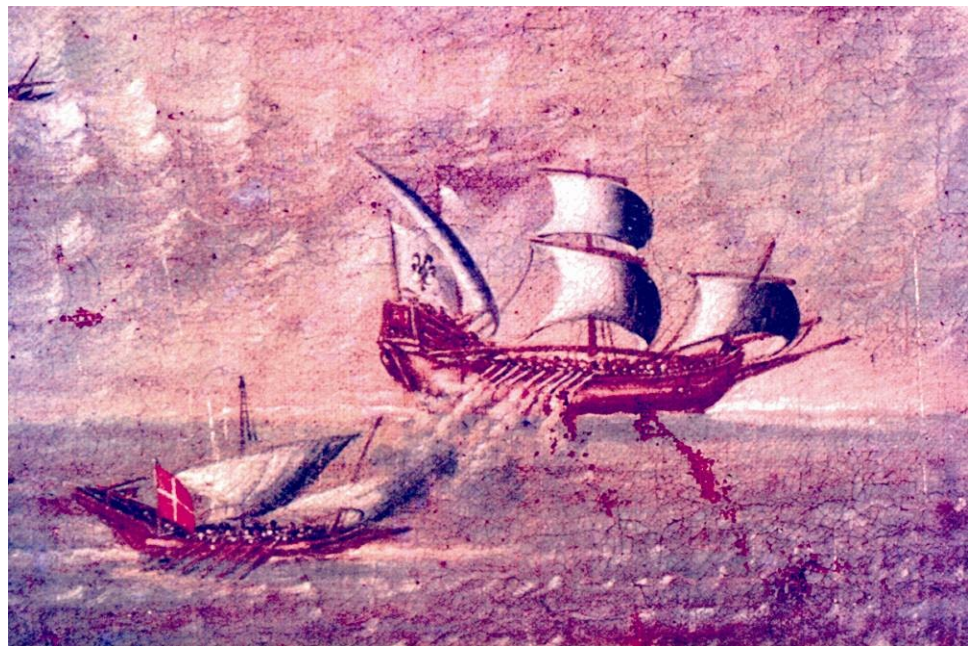
- Location: Żabbar, Sanctuary of Our Lady of Graces.
- Description: Madonna and Child sit on a cloud with the Holy Souls in Purgatory at the Madonna's feet. The Order's squadron of seven galleys is seen heading for shelter near Taranto. The topography shows the gulf of Taranto with the towns of Garipoli [Galipoli] and Taranto marked out. The galleys are depicted in three consecutive scenes. First sailing in, then becalmed, then near the town of Taranto where they seem to have suffered losses.
- Inscription: None. *"V.F.G.A."*

Photography: Nicholas C. Vella.

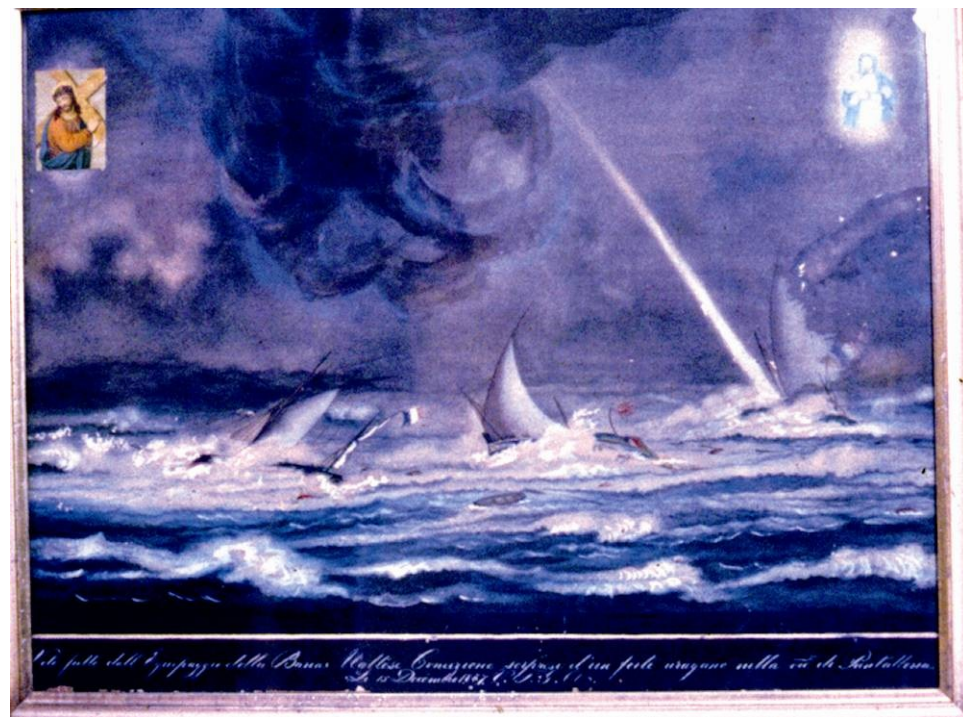
Bibliographical references: Muscat, Illustrations, 65.

- Location: Qrendi, Church of Our Lady tal-Ħniena.
- Description: A large canvas measuring107 x 83cms. The painting shows the Maltese galley squadron operating with the squadron of the Kingdom of Naples and Sicily. The vessels are battling against a raging sea and seeking the shelter of the relatively calm waters of a harbour. Intercession is sought through St Louis seen kneeling in front of Our Lady. The quality of the painting is of a much higher standard than that of the usual tabelle. This could indicated that the offering was made by an affluent person.
- Inscription: None.

Joseph Muscat slide collection 325.

Bibliographical references: Prins, frontispiece; Muscat, 129; Borg, 6.

- Location: Qrendi, Church of Our Lady tal-Ħniena.
- Description: A strange incident where a Sicilian tartana under full sail, and flying the two headed eagle flag, is seen opening fire on a smaller vessel. The smaller vessel is a Maltese brigantine also under sail and with oars in the water. It is flying the flag of the Order. No date is evident on the painting.
- Inscription: None.

Joseph Muscat slide collection 405.

Bibliographical references: Muscat, illustrations, 8.

- Location: Għaxaq, Church of Santu Kristu.
- Description: The icon of Our Lady is on the right. The picture of the Redeemer on the left is pasted on the tabella rather than drawn. Two vessels, one flying a French flag, the other a Maltese speronara flying the red duster run the gauntlet against a rough sea and what appears to be a water spout.
- Inscription: "*Voto fatto dall'equipaggio della Barca Maltese Concezione sorpresa d'un forte urugano nella vicinanza di Pantelleria li 15 Dicembre 1867. V.F.G.A.*"

Joseph Muscat slide collection 424.

Bibliographical references: Borg, 24.

- Location: Ħal Qormi, Church of Our Lady Tal-Ħlas.
- Description: Madonna of Trapani, Madonna and Child, Holy Souls in Purgatory and S. Rosalia are all looking on the proceedings. The canvas, 45 x 35 cms, shows an exceptional case of multiple intercession with a strong Sicilian flavour. A vessel flying an English flag is fighting off an attack by a smaller bandit vessel. Two persons praying on shore may be giving thanks for being spared. Stromboli can be seen in the background. Although the painting is undated the style of dress of the persons kneeling on the shore, in the foreground, show that it belongs to the 19th century.
- Inscription: None. *"V.F.G.A."*

Joseph Muscat slide collection 416.

Bibliographical reference: Prins, plate 35; Borg, 20.

- Location: San Ġwann, Minsija Church.
- Description: The Annunciation is painted in the right corner. The panel is split horizontally in two and shows a bombarda almost overwhelmed by the rough sea under sail with top main sail, jib and flying the red duster. The bombarda was on its way to Malta from Mascali a port about twelve kilometres south of Taormina. The panel is signed 'A. B. fecit'.
- Inscription: *"Voto fatto da Cap. Giovanni Bonnici e suo equipaggio e passigieri della bombarda Inglese Santa Anna e San Giuseppe li 2 Aprile 1837 essendosi di ritorno dai Mascali per Malta scoppio un gran fortunale con grosso mare e poi abbiamo ricorso alla B.V. della Mensija e cosi avuta la Grazia. V.F.G.A."*

Joseph Muscat slide collection 352.

Bibliographical references: Borg, 28.

- Location: Originally at Ta' Liesse Church Valletta, now at the Kelinu Grima Maritime Collection Nadur.

- Description: A small, 20 x 30cms, badly split and badly repaired wooden panel which is in a very poor condition overall. Our Lady of Liesse looks over a Sicilian tartana battling the waves with just a jib as a means of propulsion.

- Inscription: *"Essendo che […] trovandosi partito colla Tartana Siciliana ed in quel atto die essi era nel Mare […] gran tempesta e non aspetare […] mentre che e nel medesima […] con gran […] fece un voto alla vergine di Liesse per mezzo dal voto […] oratore per un miracolo che l'oggi fu liberato sotto li Aprile 1842. V.F.G.A."*

Photography: Martin Attard.

Bibliographical references: Unpublished.

Report on Tunny Fishing in Malta with a particular focus on the Mellieħa *Tonnara*

David Muscat,
Archaeology Services Co-operative Ltd[153]

1. Introduction

Archaeology Services Cooperative Ltd (ASC) was commissioned for the compilation of a report about the history of tunny fishing in Malta with a particular focus on the Mellieħa *Tonnara*. The aim of this report is to present the results of this research that was carried out.

This reports presents a general overview of the practice of tunny fishing in Malta, and focuses both on the Mellieħa *tonnara* as well as on similar practices of tunny fishing in Sicily.

2. The Malta-South East Sicily connection – the *Tonnara*

(David Muscat)

2.1 Early Records of Tuna Fishing in the Maltese Islands

The earliest records of tuna fishing around the Maltese Islands go back to the 15th century when according to a document found by Professor Godfrey Wettinger,[154] Salvatore and Domenico Pullicino were given permission to lay a tonnara in the Maltese waters for 10 years so as to check the feasibility of setting up a tuna industry. It is not known whether this initiative turned out successful.

2.2 The Laying out of the First *Tonnara*

Following this, in 1564, Ambrogio Tiradono, a Genoese nobleman residing in Trapani, Sicily, asked Grandmaster La Valette for permission to set a *tonnara* in the Maltese islands.[2] On 14th May 1564 Tiradano was granted permission for 10 years but had to abide by the following conditions:

(i) For the first five years Tiradono was to fish for tuna without having pay any tribute to the Grandmaster;

[153] **Daniel Borg, Marlene Borg, Joseph Calleja, David Muscat, Ernest Vella**

[154] Archivio di Stato di Palermo, Real Cancelleria, Vol 155 (1484), f. 201rv

[2] Archives of the Order of St. John in Malta, MSS 430, f. 246v - 247rv (1564) u 431, f. 240r (1565)

(ii) For the next five years he had to give the Order of the Knights of St. John one 'barili' of salted tuna out of every ten 'barili' produced;

(iii) He had to provide the local market with 500 'barili' of salted tuna and export the rest if he wished;

(iv) The Grandmaster could make use of the tunny nets of the *tonnara* once Tiradano's contract ended and did not wish to renew it;

(v) After the ten year period there would be another issue of tenders and if Tiradano submitted a good offer, he would be given first preference.[155]

In order to set up his *tonnara* Tiradano bought at his expense nets, boats and other material from Sicily. The privilige granted allowed Tiradano to lay more than one *tonnara* if he so wished. He enjoyed exclusivity in that no one else could lay a *tonnara* in Maltese waters for those ten years. Anyone else caught fishing for tuna in Maltese waters during that period would have been fined 1,000 scudi and all his equipment would have been confiscated.[156]

In those days it was common practise to grant exclusive fishing rights to entrepreneurs who invested in similar initiatives. For instance, in 1630, Principe di Villadorata acquired *iure proprietatis* to lay a *tonnara* off Marzamemi.[157]

Tiradano was given ample time to search for the best place where he could lay the *tonnara*. He could avail himself of natural water sources from wherever he wished and was even allowed to dig wells to obtain water for himself and his workmen. He could also construct stores, towers or tents related to the *tonnara* on the Order's property without the Grandmaster exacting any payment for the use of the land.[158]

Under La Valette's instructions there could not be any other fishing done for two miles around the *tonnara*. Anybody roaming around the area was to be fined 10 'scudi' with boats and other equipment being confiscated. Local people who were employed to guard the *tonnara* nets were exempted from serving in the Dejma, the local militia.[159]

There is no further mention of the *tonnara* in the rest of the 16th century. In 1649 however, Commendatore Gio. Francesco Abela in *Della Descrittione di Malta Isola nel mare Siciliano*, speaks of a place called l-Ahrax - in Mellieha - which was known for the migration and fishing of tuna:

> *"V'habbiamo anco il posto, o sito del passaggio de'tonni chiamato l'Aharasc ove si sogliono ciaschedun'anno da Partitarij pigliar buona quantita, che in quei tempi abonda l'Isola tutta"*5[160]

155

1563 Ibid.

Ibid.

[157] Lo Curzio Massimo, L'Architettura delle Tonnare (EDAS 1991), p.86

[158] Archives of the Order of St. John in Malta, MSS 430, f. 246 v - 247 rv (1564) u 431, f. 240 r (1565)

[159] Ibid.

[160] Abela Gian Frangisk, *Della Descrittione di Malta*, (Midsea Books Edition 1984), p.136-137.

This is the first direct reference up till now that points to Mellieha as the place where *tonnara* was practised. It is remarkable to note that Abela writes of large quantities of tuna caught in this place. He also points out that this activity had been going on for a while. Abela provides a rough sketch of a sea monster that in 1642 was found dead on the shore (Refer to **Figure 1**). The monster Abela referred to is thought to have been a shark since these are known to follow tuna.[161]

2.3 The 18th Century

In the early and mid-18th century, the Knights of St. John decided to fortify the coastline by the building of towers, redoubts, batteries, bastions and digging of trenches. In the vicinity of l-Ahrax, the Knights built Fedeau Battery, known as "Il-Batterija ta' Qassisu". A map of 1748 of this battery marked this fortification as a *tonnara* base –

> *"Pianta della Batteria Fedeau a sinistra della spiaggia della Melleha destinata per officina della tonnara colla piccolo aggiunta da farseli a tal fine in 1748".*[162]

Within the battery there were small rooms for 16 fishermen (*marinai*), a covered area of 25 square canes for 300 'barili', a tent covering the ditch where the fish could be placed and a ramp leading the battery to the pier. The battery was built in 1715-1716. In 1748 several alterations were made to transform the battery in a small tuna processing plant.[163]

There is evidence of similar alterations occurring in South East Sicily to improve upon *tonnara* facilities. For example, in 1726 the Rao Torres family built a *malfaraggio*, a store and other facilities to sustain the Capo Passero *tonnara*.[164] Similarly, in 1752, the descendents of Principe Nicolaci di Villadorata restructured the *tonnara* buildings in Marzamemi.[165]

On Saturday 1st June 1748 Grandmaster Manuel Pinto de Fonseca inaugurated a new *tonnara* enterprise in Mellieha Bay. The first tuna was caught the following morning and donated to Inquisitor Paolo Passionei. The nets were laid in a place called Fgura. In August of that same year a good number of amberjack (aċċjoli), were caught at one go in a *lieva*. Some of the fish caught were donated to religious and other charitable institutions.[166]

Another reference to the *tonnara* was made by Canon Gian Piet Francesco Agius de Soldanis in his book *Damma tal kliem Kartaginis mscerred fel fom tal Maltin u Ghaucin* (1755-1759). De Soldanis refers to Abela's book and to l-Ahrax as the place where the

[161] Ibid.
[162] Hughes Quentin, *Malta: A guide to the fortifications* (Said 1993), p.84-85
[163] Ibid.
[164] http://web.tiscali.it/portopalo/LaTonnara.htm, p.4.
[165] Lo Curzio Massimo, *L'Architettura delle Tonnare* (EDAS 1991), p.86
[166] Testa Carmel, *The Life and Times of Granmaster Pinto* (Midsea 1989), p.130.

tonnara was laid but he added that for several years the fishing activity in the area had ceased and that in his time steps were taken to re-establish the industry but to no avail. De Soldanis talked about the building of new stores and rooms at Mellieha Bay for the same purpose –

> *"In questi ulitimi anni rinnovato nello stesso luogo, e fabbricati alcuni magazzeni nelle rade del porto della Mellieha, me ogni cosa ando invano, sarallo in avvenire se non si daranno a conoscere piu avveduti I pescatori del tonno".*[167]

Contrary to what was happening in Malta, according to Massimo Lo Curzio, the *tonnara* industry in South East Sicily flourished in the 18th century to the extent that there was an increase in the exportation of tuna and the erection of new small tuna conservation and processing plants.[168]

For several years there was some or virtually no tuna fishing in Maltese waters. Evidence of this can be gathered from the *Libretti delle Prattiche de Bastimenti con la Nota del loro quipaggio e passagieri*. This book mentions that in August 1745 Andrea Farrugia from Zabbar, together with five other men from Zabbar, Ghaxaq and Cospicua, made five trips to Marzamemi to import tuna to Malta.[169]

Similarly, in the same year, Filippo Farrugia from Cospicua, together with six other men from Cospicua and Zabbar, made five other journeys to Marzamemi and Capo Passero for the same purpose. Regular trips to Marzamemi and Capo Passero were made every year from June to September. Usually they travelled in a *xprunara* aboard which there used to be five to ten men and 10 to 15 tuna for the local market.[170]

Several other attempts were made in the late 18th century to re-organise the *tonnara* at Ghadira. For instance, on 13th March 1779 Felice Borg was granted the privilege by Fra Ludovicus d'Almeijda on behalf of Grandmaster de Rohan to lay the *tonnara* at Mellieha Bay. To set up the necessary nets, Borg spent 2,000 scudi.[171]

Apart from Mellieha Bay, the *tonnara* was set at other sites in the North of Malta, namely Irdum id-Delli, limits of Mellieha, il-Gzejjer ta' San Pawl, l-Ghallies and Madliena Bay.[172]

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[167] Agius De Soldanis, *Damma tal kliem Kartaginis mscerred fel fom tal Maltin u Ghaucin*, National Library of Malta (1759), MS 143, f.136

[168] Lo Curzio Massimo, *L'Architettura delle Tonnare* (EDAS 1991), p.112

[169] *Libretti delle Prattiche de Bastimenti con la Nota del loro quipaggio e passagieri,* National Archives of Malta (1745)

[170] Ibid.

[171] NAM, Petitions 1143/B (1899).

[172] NAM, Government Gazette, 20/5/1899.

2.4 The 19th Century

In 1849 Carmela de Stefano asked Governer O'Ferrall to be granted permission to lay a *tonnara* not only at Irdum id-Delli but also at l-Ghallies and il-Gzejjer ta' San Pawl. In her petition, de Stefano refers to six to eight sites which were used for tunny fishing. De Stefano was given a permit by the Marine Police Department to lay the *tonnara* in the three sites listed above on the 30th June 1849.[173]

Another *tonnara* was laid at least from 1856 at Marsaxlokk. It seems that this was the only place where a *tonnara* was set in the South of Malta. In 1876 a man by the name of Diacono employed around 30 men in his *tonnara*.[174]

A section of the net in those days was called "disa" and the cables were made of esparto grass. A *tonnara* was laid in Marsaxlokk up to 1895 when the *Societa Maltese de Pesca* decided to abandon this enterprise due to other fishing practices in the waters surrounding the *tonnara*; practices which were hindering the same *tonnara*. Diacono had requested that the Government forbid other fishing practices in the vicinity of the *tonnara*.[175]

Unlike what happened in Sicily at the end of the 19th century, where the five *tonnara* from Capo Murro di Porco to Capo Passero, South East, i.e. Torreuzza, Marina di Avola, Vendicari, Marzamemi and Capo Passero, were given legal protection,[176] the *Societa Maltese de Pesca* was not given any privilege and had to abandon his iniative.[177]

2.5 The 20th Century

In the early 20th century several *tonnare* were laid around the islands. On 20th May 1899 the Collector of Customs, F. Vella, issued a notice calling for tenders for the licences of *tonnara*. These were to be submitted by 31st August 1899. Interested people could apply to lay a *tonnara* in any locality they wished. However the notice referred in particular to seven established sites, i.e., St. Paul's Bay, Mellieha Bay, Cirkewwa, Gnejna, Delli, Marsaxlokk and San Blas, Gozo.[178]

In 1901 Salvatore Ellul Bonici, owner of the Delli and Cirkewwa tonnare, in a petition to the Government wrote about the heavy costs incurred to obtain all the necessary material and tools to set a *tonnara* similar to the Sicilian system, something which Ellul Bonici claimed was "a novelty to Malta":

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[173] NAM, O'Ferrall Petitions Vol.3 (1849-1851)
[174] NAM, Petitions 3019 (1876).
[175] NAM, Petitions 6088 (1895).
[176] Lo Curzio Massimo, *L'Architettura delle Tonnare* (EDAS 1991), p. 56-63.
[177] NAM, Petitions 6088 (1895).
[178] NAM, Government Gazette, 20/5/1899.

"Introdurre in questa isola la pesca con reti simile a quella che si usa in Sicilia, Tunisia e Francia".[179]

The same Ellul Bonici invested a lot of money in the *tonnara* industry. Sometime around 1900-1905 he built a large store for tunny nets at Bu Nuhhala, near Anchor Bay, limits of Mellieha. The building cost him £300 and the *tonnara* itself cost him £4,000.

The elderly still recall the Sicilian *tonnaroti* (*bahrin* in Maltese) who sat up camps and tents for three months near the Bu Nuhhala *tonnara* store. The Sicilian *tonnaroti* taught the Mellieha *bahrin* how to lay the nets, capture and handle tuna and other fish. In 1905 Ellul Bonici built another warehouse (magazzeno) at St. Paul's Bay to shelter the boats and nets of his tunny fishing enterprise.[180]

In 1908 Ellul Bonici, in another petition to the Governor of Malta, referred to his *tonnara* as based on the Sicilian system. Ellul Bonici used to lay the nets at Id-Delli from mid-April to end of June and at Mellieha Bay from July up till September.[181] Sicilian *tonarroti* continued to visit Malta to train the Maltese *bahrin* and participate in the local *tonnara* up to the 1920s.

According to several sources, some based on personal experience, who worked with the Mellieha *tonnara*, the owners of this enterprise used to buy boats and other equipment from Sicily. Gamri Fenech, the last *padrun* (*rais*), in an interview with David Muscat,[182] spoke about the purchase of a *xieru* (the main *tonnara* boat) from Syracuse, some time around the 1950s. At that time several Sicilian *tonnara*, for instance those of San Panagia, Marzamemi and Di Avola, were in decline and their owners were selling boats and other equipment.[183]
In the summer of 1961 a minesweeper tore apart the last *tonnara* laid in Mellieha Bay. From then onwards no further attempts were made to lay any other *tonnara* in Maltese waters.[184] A similar fate struck the Capo Passero *tonnara* in 1975 when an oil tanker ruined the nets.[185]

2.6 The Structure of the *Tonnara*

Unlike most of the tonnare of South Eastern Siicily, the Mellieha *tonnara* was more of a tonnarella since it employed around 20 people. There was always one rajjes (rais) unlike, for example, the two raisi of the Capo Passero *tonnara* and not more than five boats were

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[179] NAM, Petitions 4657/E (1901).
[180] NAM, Petitions E462 (1905).
[181] NAM, Petitions E1947 (1908).
[182] Personal Communication (1993).
[183] Lo Curzio Massimo, *L'Architettura delle Tonnare* (EDAS 1991), p.66-74.
[184] Muscat David 2000, History of It-Tunnara tal-Mellieħa, unpublished paper, Interview with Gamri Fenech
[185] http://web.tiscali.it/portopalo/La*Tonnara*.htm, p.7.

used. It seems that the Maltese did not make use of the boat called in Sicilian "musciara"[186]5

The Maltese *tonnara* was made up of just two rooms – il-kampin and il-qtil il-ħut. The setting of the nets was similar to that of the Sicilian *tonnara* but on a smaller scale. The Maltese *tonnara* nets were laid at the end of April/beginning of May and the season lasted until June. However, for several years, the *tonnara* was laid also from July until September. This meant that in Malta both the *tuna di corsa* (tonn bikri) and *tuna di andata* (tonn tal-ħarif) used to be caught unlike in South East Sicily where the nets were laid only from May until June.[187]

3. A Survey of Westreme Battery, Mellieħa Bay.

3.1 Introduction

Mellieħa, situated along the Northwestern coast of the Maltese islands suffered mainly from seabound pirate attacks. In the 16th century the Knights of the Order of St John followed the example of Sicily and started building watchtowers along the Maltese coasts.[188] In 1714, French military engineers urged the Knights to defend the coasts of Malta. As part of this ambitious project Mellieħa Bay was fortified with two batteries, Fedeau on the northern shore and Westreme on the southern shore of the bay. A redoubt was installed at the back of the bay.[189]

3.2 Fedeau Battery

Fedeau Battery known also as Tonnara, Ta' Qassisu or Vendôme battery, was built between 1714 and 1716 on the left hand side of Mellieħa bay. This battery was armed with four 8-pounder iron cannon. The blockhouse of this battery served a secondary role to that of defence. In 1748, the blockhouse was enlarged to serve as an officina della Tonnara where 300 barrels of fish could be stored.[190] Today the site of the blockhouse and battery is occupied by a tourist resort.

3.3 Westreme Battery

Westreme or Ta' Rasus Battery was built between 1715 and 1716 on the southern shores of the bay (refer to **Figure 2**, **Plates 1** and **2**). This battery still retains signs of the ditch,

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[186] Muscat David 2000, History of It-Tunnara tal-Mellieħa, unpublished paper, Interview with Anthony Fenech.

[187] Ibid.

[188] Mallia David - Malta: A case study in the development of fortifications. The Spanish-Portugese bastioned towns as a world route amongst the five continents- The arrival of the Knights of St John in Malta.

[189] Spiteri C. Stephen 2002, pg 81,87.

[190] ibid., pg 82.

the circular gun platform cut in the rock and traces of gun emplacements (refer to **Figures 3, 4** and **6**, and **Plates 4** to **7**). On the other hand, the blockhouse still survives and lately has been restored by the Restoration Unit of the Works Department as part of a project by the Mellieħa Local Council to house a museum of the *Tonnara*5

The blockhouse was placed diagonally along the gorge of the battery so that two of its outer faces served as a redan and helped defend the landward approaches to the work. The blockhouse still retains original features including barrel vaulting of the ceiling and musketry loopholes in the outer walls (refer to **Figures 6** and **5, Plates 1** to **3**). [191]

Throughout the British period, many coastal military buildings were handed over to the Civil Government. In 1889 the British Government leased Westreme Battery for a period of 24 years to Federico Borġ to store the *Tonnara*5[192] This Battery served as a store for the *Tonnara* up till summer of 1961 (refer to **Plates 8** and **9**).

During the late 1930s prior to the Second World War the British started another programme of coastal defence around Mellieħa. Gun emplacements were added to the roof of the blockhouse, a search light room was built adjacent to the blockhouse whilst a beachpost was dug in the circular gun platform of the Knights' battery.

3.4 The *Tonnara* Museum

After the *Tonnara* ceased in 1961 when a minesweeper destroyed the nets,[193] the battery was practically abandoned and squatters used it as a seaside resort. However old people still recounted their experience on the *Tonnara*. In 1993 a group of young people, members of a cultural Non-Governmental Organisation, the *Nixxiegħa Kulturali* started working to create a *Tonnara* museum along with the Mellieħa Local Council. One of these young people, David Muscat started interviewing old seamen who worked on the *Tonnara* and started archival research which he is still undergoing.

By 1999 the Maltese Government leased Westreme battery to Mellieħa Local Council in order to setup a museum of the *Tonnara*. The Local Council requested Archaeology Services Cooperative Ltd, to produce a plan of the Museum. Presently Art Club Mellieħa is setting up the Museum.

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[191] ibid., pg 82.
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Appendix I:

Glossary of Terms
Related to the *Tonnara*
(David Muscat)

Maltese	**Sicilian**	**English**
Tonn	Tonno	Tuna
Tonnara/Tnanar	*Tonnara*/e	Tunny net
Pedal	Pedale	A long net leading to the main net.
Spika/Spejjek	Spigolo	Entrance to main net
L-itkalar	Calatu	Laying of the nets
Disa	Ddisa	Fabric of the net
Baħrin	Tonnaroti	Tuna fishermen
Rajjes/Padrun	Rais	Leader of the *tonnara*
Sid	Padrone	Owner
Xieru	Sciere	The main boat
Mażżri	Mazziri	Stones thrown into the sea to hold the nets in place.
Qtil il-ħut	Mattanza/ Camera della morte	Slaughter of tuna
Lieva	Leva	Lifting of the nets
Maħżen	Magazzeni	Store

Figures

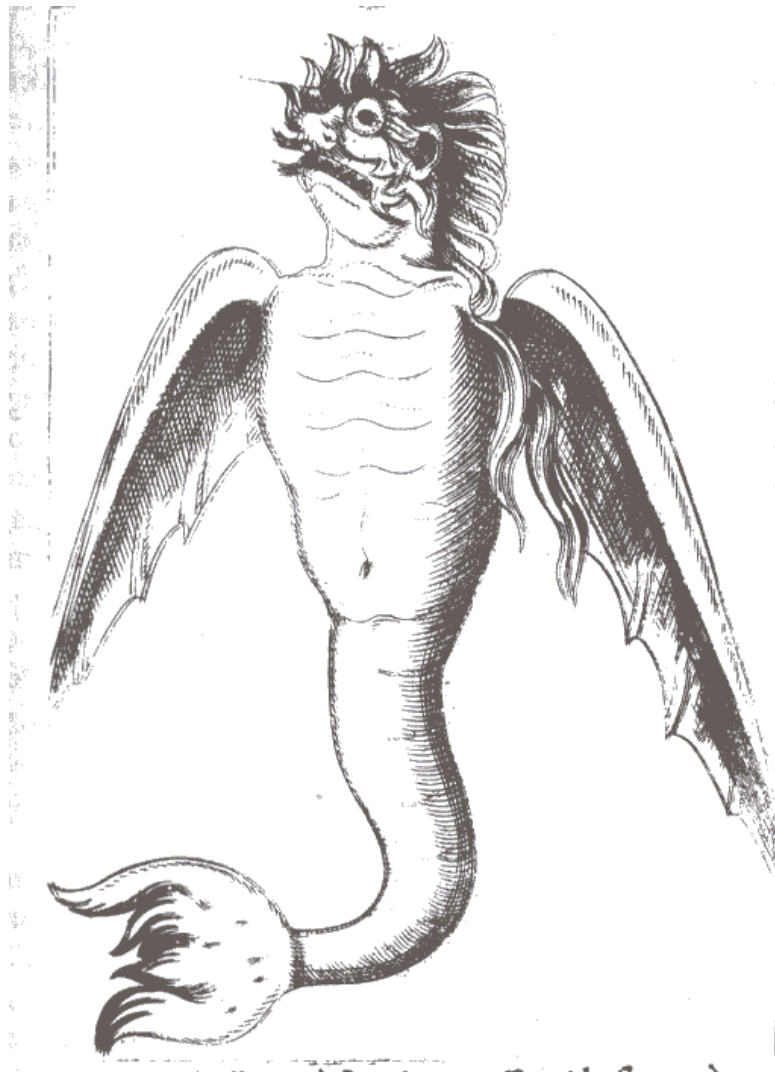
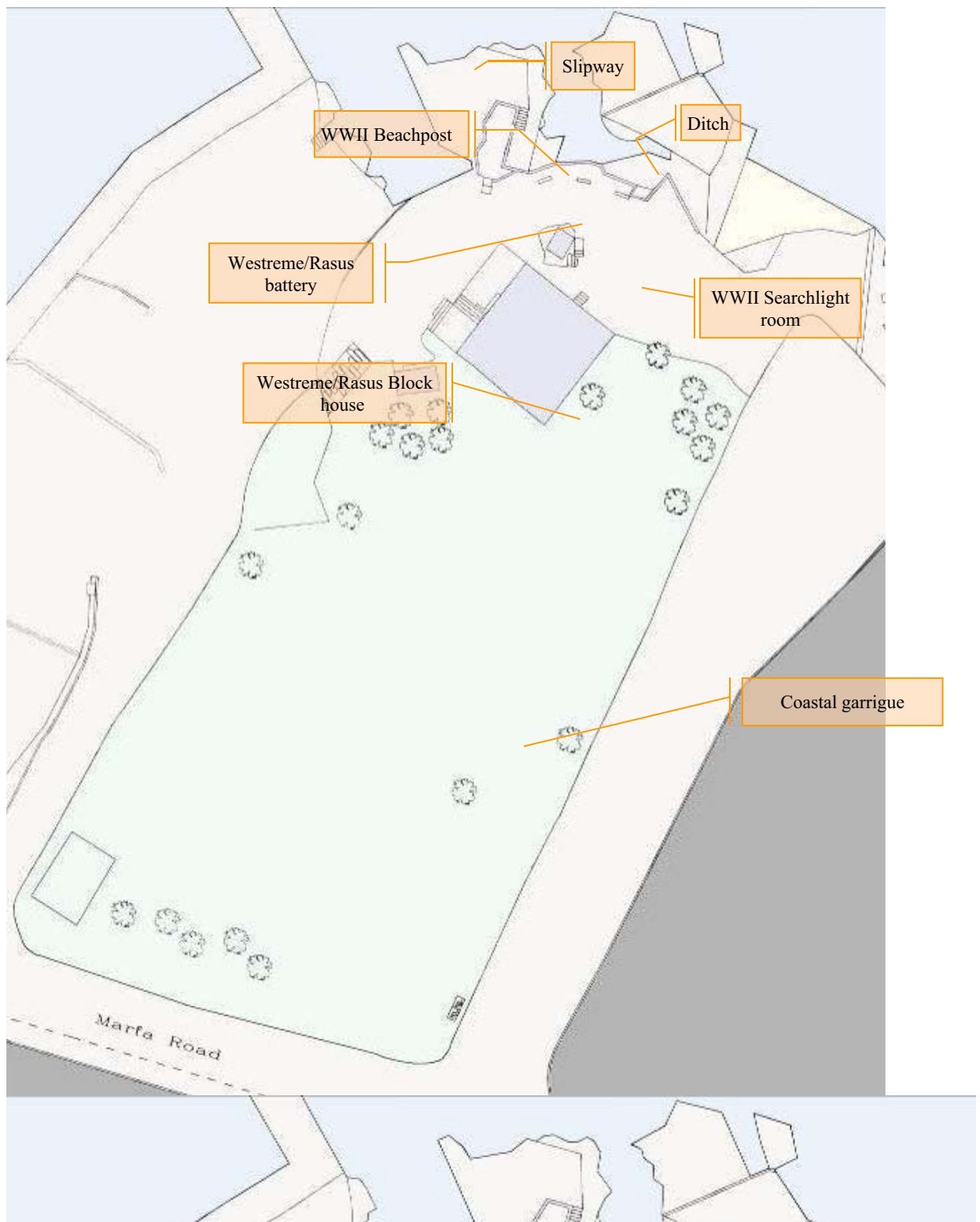



Figure 1: Sea monster depicted by Abela (1647: foglio 137)

gure 2: Mellieħa Bay and Westreme Battery complex

late 19th and early 20th century

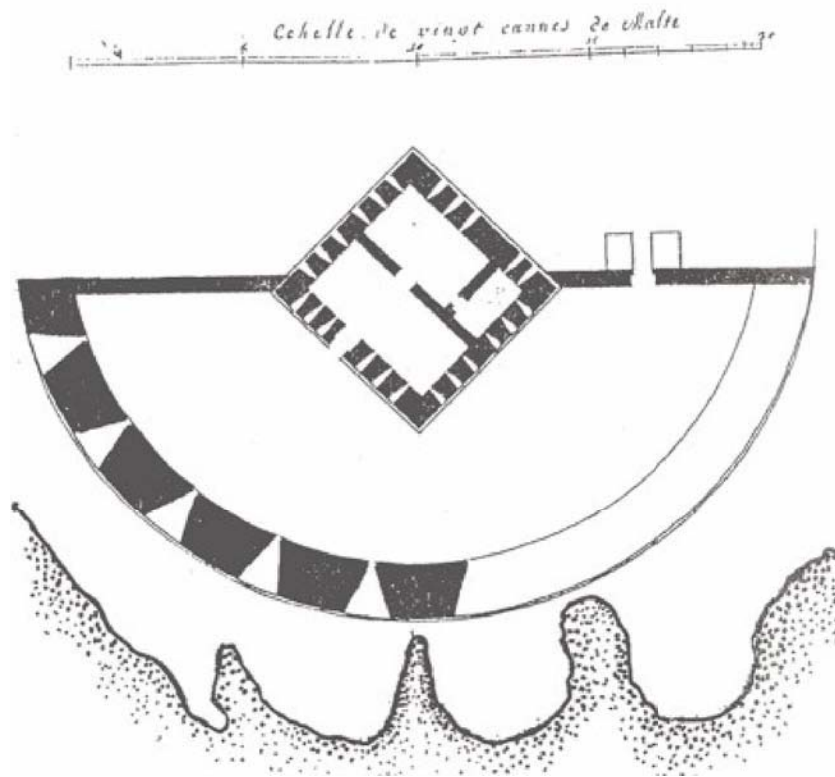



Figure 4: Plan of Westreme/Ta'Rasus Battery (Spiteri 1989: 180 fig.214)

Plate 1: Façade of Westreme Blockhouse

Plate 2: Westreme Blockhouse from the South

Plate 3: Musketry embrasures

Plate 4: Ditch and cannon platform

Plate 5: World War II gun emplacements

Plate 6: Search light room

Plate 7: Beach post

Plate 8: One of the Large anchors known as *Kap Rajjes*

Plate 9: A *barkazza* lying in front of Westreme Battery

K.A.S.A. è l'acronimo di *Koiné archeologica, sapiente antichità*. E' un progetto realizzato dalla Facoltà di Lettere e Filosofia dell'Università di Catania, dalla University of Malta e dalla *Officina di Studi Medievali* di Palermo e finanziato nell'ambito del programma *Interreg IIIA Italia-Malta*, anno 2004-2006, proposto dalla Regione Siciliana con contributi della Comunità Europea (European Regional Development Fund). L'obiettivo strategico del progetto è la valorizzazione del patrimonio culturale (sia monumentale sia immateriale) che accomuna le province di Siracusa e Ragusa e l'arcipelago maltese, per rafforzare le identità delle comunità locali e la reciproca conoscenza, riqualificare in senso culturale i flussi turistici già esistenti, inserire siti minori finora poco conosciuti all'interno dei circuiti, incrementare il turismo di qualità proveniente da altre aree italiane ed europee.

K.A.S.A. is the acronym of *Koiné archeologica, sapiente antichità* (Archaeological community, wise antiquity). It is a project realized by the Facoltà di Lettere e Filosofia of the University of Catania, by the University of Malta and by the *Officina di Studi Medievali* of Palermo, funded by the European Regional Development Fund (2004-2006) within the *Interreg IIIA Programme, Italy-Malta*, years 2004-2006, a Community initiative which aims to stimulate co-operation between regions throughout the European Union.
The strategic goal of the project is the valorisation of a shared cultural (both tangible and intangible) heritage between the provinces of Syracusa and Ragusa and the Maltese archipelago, in order to reinforce local identities and reciprocal knowledge, to upgrade the already existent touristic flows with a cultural direction; to introduce minor, less known sites in established touristic networks, and to promote cultural tourism coming from other areas of Italy and Europe.

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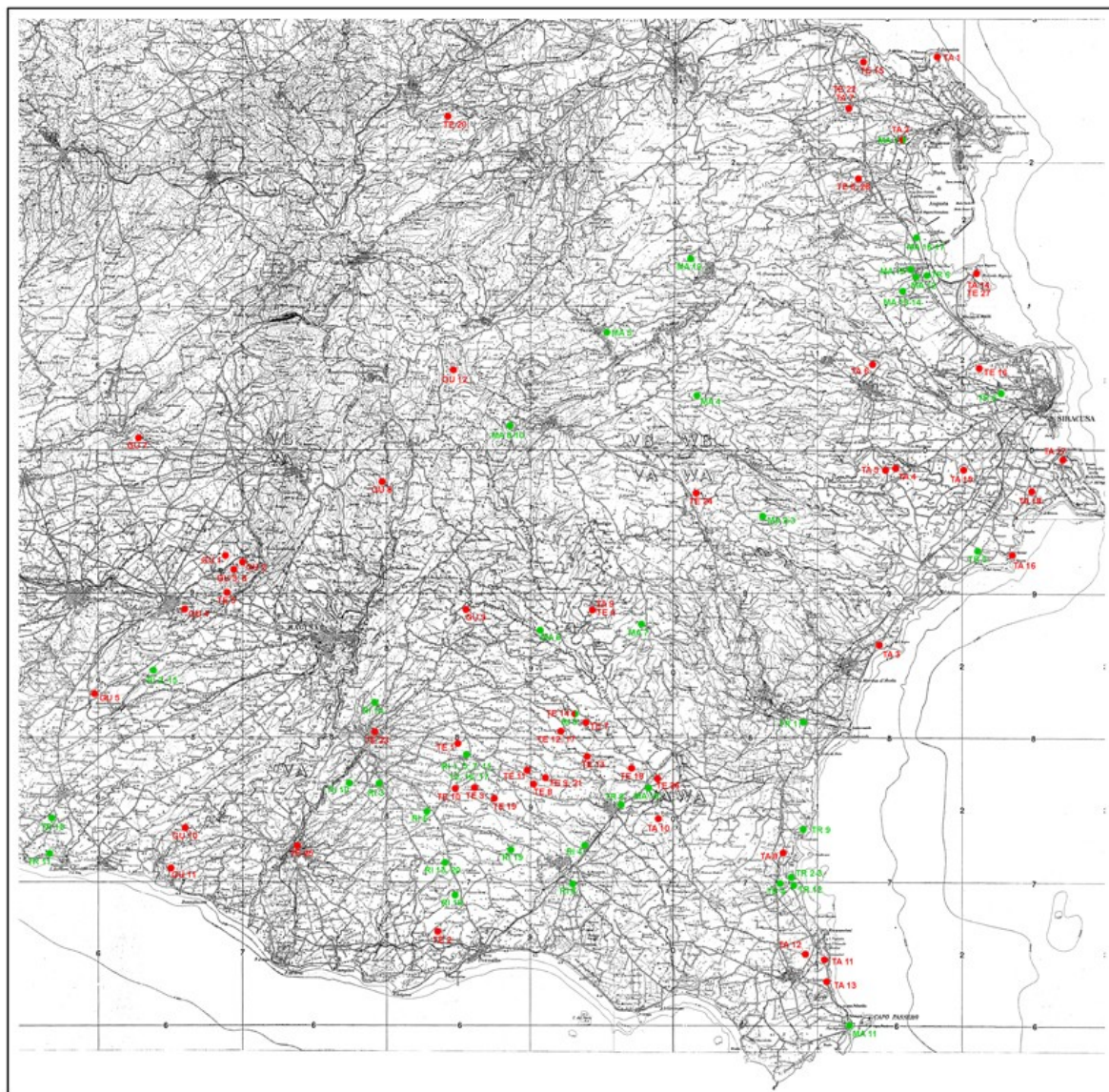
Carta della Sicilia Sud-Orientale con indicazione dei siti archeologici preistorici e tardo antichi di influenza maltese

Scala 1:200.000

Elaborazione grafica a cura di Davide Tanasi

SITI PREISTORICI (48)

GU 1 - Monte Tabuto
GU 2 - Monte Racello
GU 3 - Monte Salia
GU 4 - Contrada Sante Croci
GU 5 - Contrada Paolina
GU 6 - Cozzo Ciavole
GU 7 - Torre Mazzaronello
GU 8 - Calaforno
GU 9 - Cava dei Servi
GU 10 - Cozzo Galesi
GU 11 - Contrada Maestro
GU 12 - Monte Casale/Grotta Masella

TA 1 - Campolato di Augusta
TA 2 - Molinello
TA 3 - Avola
TA 4 - Grotta del Conzo
TA 5 - Grotta della Chiusazza
TA 6 - Contrada Tabaccheddu
TA 7 - Timpa Dieri/Petraro
TA 8 - Vendicari
TA 9 - Castelluccio
TA 10 - Costa dei Grani
TA 11 - Grotta di Calafarina
TA 12 - Cugni di Calafarina
TA 13 - Vulpiglia
TA 14 - Thapsos
TA 15 - Cozzo del Pantano
TA 16 - Isolotto di Ognina
TA 17 - Plemmirio
TA 18 - Matrensa

TE 1 - Baravitalla - Cava Ispica
TE 2 - Bellamagna
TE 3 - Calicantone I
TE 4 - Castelluccio I
TE 5 - Castiglione
TE 6 - Cava Baratta
TE 7 - Cava del Prainito - Povere Donne
TE 8 - Cava Granati/Ternulla I
TE 9 - Cava Granati/Vacche Morte
TE 10 - Cava Lavinaro I
TE 11 - Cava Lazzaro I
TE 12 - Cava Palombieri/Case Molè
TE 13 - Cava Palombieri/Cozzo Scalarangio
TE 14 - Cava Prainito/Cozzo Tondo
TE 15 - Cozzo Telegrafo
TE 16 - Epipoli
TE 17 - Gesira
TE 18 - Granati Vecchi I
TE 19 - Grotticella
TE 20 - Ossena di Sopra I
TE 21 - Pernice
TE 22 - Petraro
TE 23 - Quartiriccio - Modica
TE 24 - S. Alfano/Passo del Ladro
TE 25 - Scicli
TE 26 - Stafenna
TE 27 - Thapsos
TE 28 - Timognosa

SITI TARDO ANTICHI (51)

MA 1 - Molinello
MA 2 - Cozzo Guardiole
MA 3 - Sant'Elania
MA 4 - S. Giovanni
MA 5 - Ferla
MA 6 - Ex feudo Gisira
MA 7 - Grotta delle Monete
MA 8 - Intagliata
MA 9 - Intagliatella
MA 10 - Senebardo
MA 11 - Portopalo
MA 12 - Cava delle Porcherie II
MA 13 - Manomozza I
MA 14 - Manomozza II
MA 15 - Monachella
MA 16 - Riuzzo I
MA17 - Riuzzo II
MA 18 - Stafenna I
MA 19 - Lardia I

TR 1 - Favorita
TR 2 - Trigona di Cittadella di Vendicari
TR 3 - Basilica di Cittadella di Vendicari
TR 4 - S. Lorenzo Vecchio
TR 5 - Cuba di S. Teresa
TR 6 - S. Pietro ad Baias
TR 7 - S. Focà
TR 8 - Basilica Palazzo Platamone di Rosolini
TR 9 - Tonnara di Vendicari
TR 10 - Pirrera
TR 11 - Caucana
TR 12 - Cittadella dei Maccari

RI 1 - Cava Ispica - Larderia
RI 2 - Grotta delle Trabacche
RI 3 - Treppiedi
RI 4 - Sulla
RI 5 - San Pancrati
RI 6 - Penninello Malvasia
RI 7 - Finocchiara, ipogeo E
RI 8 - San Marco
RI 9 - Cozzo Tondo
RI 10 - Cava Ddieri
RI 11 - Grotta dei Santi
RI 12 - San Nicola o Grotta della Madonna
RI 13 - Scorrione
RI 14 - San Bartolomeo
RI 15 - Buttino
RI 16 - Santa Maria
RI 17 - Spezieria
RI 18 - Cella
RI 19 - Martorina - Coda di Lupo
RI 20 - Scorrione